ne Iron

READING MATTER

VES

A Review of the Hardware, Iron and Metal Trades.

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Italy as an Iron-Producing Country.

The English consul at Leghorn, in discussing the possibility of using the iron deposits of Elba for steel-making, quotes the opinion of a mining authority of that district, as follows: "The Elba ores are generally rich, yielding on an average 58 per cent. of metal, and free from appreciable quantities of phosphoric acid; but they generally contain somewhat more sulphur than is desirable in ores intended for steel-making purposes, if used alone. It has, however, been pointed out by the Italian Mining Department that, by an admixture with them of the calcareous and manganiferous ores from the mines of Monte Argentario, pig iron may the calcareous and manganiferous ores from the mines of Monte Argentario, pig iron may be produced of the highest quality, containing some manganese and free from any excess of sulphur, and especially adapted for conversion into steel. The one drawback to the establishment of steel works in connection with the Italian mines arises from the fact that Italy possesses no coal deposits within its boundaries. There are, indeed, numerous mines of lignite in different parts of the peninsula, but metallurgical science has not yet succeeded in adapting this combustible to the smelting of iron ores. In its natural state it would be useless for this purpose, and coke cannot be made from

coke cannot be made from coke cannot be made from it. Charcoal, it is true, is still abundant in Italy, and it is well adapted for smelting purposes; but year by year the production of it tends to decrease, as land is deforested and brought into cultivation. Then, again, extensive works, as contemplated in again, extensive steel works, as contemplated in this case, would require something like 30,000 tons in year of charcoel—a fuantity which it would be appossible to procure without difficulty or without forcing up the price of the commodity to an impossible level. Hence these works would have to depend upon coal imported from foreign countries, and pend upon coal imported from foreign countries, and this would probably mean from England, as the country best able to supply good coal at a low price. "Notwithstanding this apparent disadvantage, it is contended that the steel works would answer well.

works would answer well. It is pointed out that the manufacturers of steel manufacturers of England depend principally upon iron ores imported from Spain, &c., and with-out these their enormous production would be at a great disadvantage, and prices would soon attain. prices would soon attain a level different to what they now occupy. In the present day, when the consumption of coal in iron-making has been by the modern processes reduced to little over 13/4 tons per ton of pig iron when rich ores are smelted—while, on the other hand, it may be taken that 2 tons of Spanish ores are required rices would soon attain a Spanish ores are required to make a ton of pig iron—the advantage for Italy, possessing rich ores on the seacoast, may well stand as a set-off against the disad-

required for their construction, instead of, as at present, being compelled to import everything from abroad. For an indefinite number of years Italy will require at least 60,000 tons of rails a year, and probably more, for new lines and renewals of existing ones. If all this material were produced in the country, besides giving work to many the country, besides giving work to many thousand men and developing the resources of the country, it is evident the money it represents would remain at home, with the exception only of the cost of imported coal. This may be approximately estimated at one-fifth of the whole amount, the other four-fifths representing the ores, fluxes, labor and

Various localities, observes the Ironmon

had risen to 403,000 tons. Of this ore the Government foundries used, in 1881, 19,232 tons, and private firms 10,500, the average price in 1881 having been 12 lire 17 centesimi per ton (the lire is about 9½d.) The quantity exported to France in 1881 was 55,532 tons, and to England 204,808 tons. Of late years in consequence of crises in the iron trade, the price of Elba ore has not averaged more than 8 to 9 lire per ton, but, owing to unexpired contracts for French furnaces at 13 lire 750, per ton, the mines gave a handsome return, notwithstanding prevailing depression, so that in 1873-74 they prevailing depression, so that in 1873-74 they produced a net income of 2,600,000 lire. During the past year freights to England for ore loaded at Rio (Elba) have averaged 5s. and to North America Ss. per ton. The mineral

tion of steam in cities is not a failure, and the limited time during which it has been tried, here while perhaps not having yielded highly gratifying results, has not been dis-

case been extremely gratifying.

Poor's Railroad Statistics.

"Poor's Manual of the Railroads of the United States for 1884," has just been issued, toontaining full statistics of railroad operations, construction, &c., in 1883. From its mass of valuable information we take the following summary:

The statements show a mileage at the close of the calendar year 1883 of 121,592 miles, 6753 having been constructed within the year. The total length of completed road at the close of the companies' fiscal year was 110,414. The amount of share capital issued by the several companies up to the close of their respective fiscal years was \$3,708,060,583, an increase in the three years equaled the increase of funded and floating debts by at least the sum of \$200,000. The cost of the mileage constructed earth whole increase of the funded debt, was in excess of cost of construction. Stocks and bonds to the amount of \$303,132,-000 were listed at the New York Stock Exchange in 1883. The amount of stocks and bonds listed was equivalent to about \$80,000 per mile of new road built during the year. A con-

equivalent to about \$80,000 per mile of new road built during the year. A con-siderable amount, how-ever, of the securities listed was on account of old

One cause of the great decline in the shares of lines which were dividendpaying is the competition resulting from the construction of rival lines. The result of this competition is particularly shown in the two great Pacific roads, the Union and Cen-tral, both of which for many years have regularly paid dividends, but both of which have now been compelled to forego them. A few years ago there was in public estimation no more inviting field for railroad enterprises than the State of Colorado. A vast sys-tem of railroads, covering the whole State, was constructed with very great rapidity, involving a nom-inal expenditure of nearly inal expenditure of nearly \$100,000,000, almost the whole of which is unproductive. It is safe to assume that the new mileage constructed in the past three years cost about \$30,000 to the mile; and that when our people build, say, 10,000 miles of line in one year, they expend upon them \$300,000,000. In addition a very large amount of fresh capital is yearly expended on old lines, so that we have for many years past been exmany years past been ex-pending upon railroads considerably over \$1,000,-000 for every working day

in the year.

If it be assumed that the cost in money of all the roads in operation in the United States in 1883 did not exceed, as it certainly did not, the amount of

funded debts of the several companies amounted to \$3.45,040,383, an increase from the previous year of \$210,497,060. Their floating or unfunded debts amounted to \$332,370,345, an increase of \$61,199,383 from the previous year. The total increase of share capital and of funded and floating debts from the previous year equaled \$477,-721,202. The total amount of liabilities at the close of 1883 was \$7,495,471,311. The total per mile for completed mileage was \$62,176. The total of stock and liabilities for 1882 was \$7,016,750,109; per mile, \$61,762. The total for 1881 was \$6,278,565,052; the amount per mile, \$60,645. The total for 1881 was \$6,278,565,052; the amount per mile, \$60,645. The total for 1881 was \$6,278,565,052; the amount per mile, \$60,645. The total for 1880 was \$5,402,038,257; per mile, \$51,500. freight would equal \$10,000,000. The total movement of freight on all the railroads of the United States for 1883 equaled .44,064,-923,445 tons moved one mile, at an average charge of 1 24 cents per ton per mile. The total number of passengers transported on all the railroads of the United States the past year, not including the New York elevated roads. was 312,686,641—a number equaling more than six times the total population of the United States in 1880. The total movement on all the roads equaled 8,541,309,674 per sons moved one mile, at a charge of 4.42 cents per passenger per mile.

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where it is used for making steel. In consequence of the crisis in the iron trade work was then partially suspended, but in the campaign of 1880 it was resumed with considerable activity, the yield being 24,471 tons; increased in 1881 to over 30,000 tons. Owing to present depression shipments have almost ceased. As regards copper, in 1880 the Fenice Massetana Mine, in the province of Grosseto, was the most productive, the output being 4452 tons, representing a value of 422,992 lire, and surpassing the once famous copper mine of Monte Catini, in the Val di Cecina, which some years ago is said to have yielded a clear annual income of £40,000. The present produce of this tons; increased in 1881 to over 30,000 tons. Owing to present depression shipments have almost ceased. As regards copper, in 1880 the Fenice Massetana Mine, in the province of Grosseto, was the most productive, the output being 4452 tons, representing a value of 422,902 lire, and surpassing the once famous copper mine of Monte Catini, in the Val di Cecina, which some years ago is said to have yielded a clear annual income of \$40,000. The present produce of this mine is about 200 tons a month, and is shipped to Genoa, where it is smelted by a recently-created company, using furnaces in which fusion is said to be obtained by an electric current.

their funded and floating debts, \$3,787,491,723, the content them. With iron ores containing 58 per company working the Elba mines and other the blast furnace at a cost not exceeding 7/ per ton, and manganiferous ores on the seasoem spood reason to hold that steel could be seems good reason to hold that steel could be manufactured article imported from forcing countries. With the manufactured article imported from forcing countries. With the special case. The sliding-block D, which having adopted the system of building the size of bilding-block D, which having adopted the system of building havi carries the bending rollers C, is made to move in its slideway, E, by means of a screw shown at the extreme left and operated by a series of bevel gears, and may be stopped at any point by means of a dog, R, which acts on a disengaging clutch, P, and thus throws the vertical screw out of gear. The hand-wheel J serves for bringing the slide to

Various localities, observes the Ironmonger, have been proposed as suitable for the erection of these works, but nothing has been decided as yet. If the scheme were carried out it would no doubt be detrimental to English metallurgical establishments, from which up to the present a large proportion of the iron and steel and heavy armor plates used in Italian naval yards has been drawn. The output of the Elba mines been drawn. The output of the Elba mines been drawn. The output of the Elba mines been drawn. In 1871 the total was 50,800 tons only. In 1881 it

303. The total for 1881 was \$6,278,565,052; the amount per mile, \$60,645. The total for 1880 was \$5,402,038,257; per mile, \$58,624. The total for 1870 was \$4,872,017,417; per mile, \$57,730. The increase of cost in the four years since 1870 as represented by share capital and debt equals \$4446 per mile, and for the whole number of miles

(120.552) constructed a total of \$535,974,192.
The gross earnings of all the roads for their several fiscal years of 1883 were \$823,772, 924, an increase from the previous year of \$53,563,025 Of the gross receipts, \$215, 287,824 were received from passengers, \$549,756,695 from freight, and \$58.728,405 m miscellaneous sources. The net earn crease of \$21,461,082 from the previous year. The amount of interest paid was \$173,139,-064, an increase of \$18,843,684 from the pre-

Mr. Thomas Fletcher, an Englishman, has just brought out a new system of blowpipe for use in repairing machinery without the necessity of pulling down and re-erecting. The amount of interest paid was \$173,139, of the amount of interest paid was \$173,139, of the amount of interest paid was \$173,139, of the amount of dividends paid was \$102,052,548, an increase of \$21,111, from the previous year. The percentage in 1883 of gross earnings to investment was 10.99 per cent; in 1882, 11.74; in 1884, 11.36; in 1880, 11.36; in 1879, 10.80. The percentage of net earnings to investment in 1883 was 4.49 per cent.; in 1882, 4.81; in 1881, 4.56; in 1880, 5.04, and in 1879, 4.40

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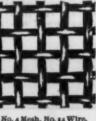
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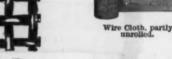
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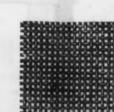
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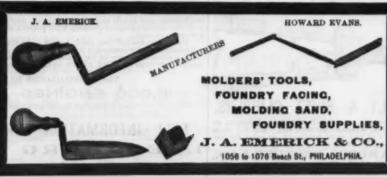
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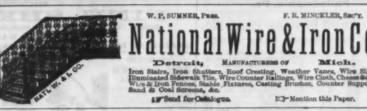
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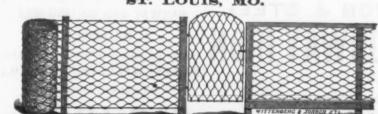
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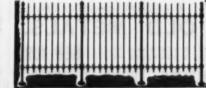
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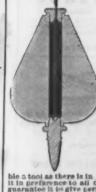
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BY JOHN W. NYSTROM.

In a recent experiment on strength of flat cast-iron boiler heads, made at the Franklin Institute by hydrostatic pressure, it was found that the pressure-gauges showed a much higher pressure than the boiler shell could have borne, yet the cast-iron head burst, while the shell remained intact. The experimenter attempts to explain this phenomenon as follows: "In the matter of contriction of the cast applying hydrostatic pressure, the momen-tum of the fluid as forced into the vessel plays an important part, and sometimes, if not frequently, by concussion, causes rupture not frequently, by concussion, causes rupture or breaks in vessels at pressures far below those that they have resisted under slow and steady application of hydrostatic force." The same experimenter has "found that these facts were either not generally known, or else their importance had been frequently overlooked where they should have been considered and attentively regarded."

The subject of momentum of a moving body is the first lesson in dynamics of matter—namely, that the force F is to the mass M

—namely, that the force F is to the mass M as the velocity V is to the time T.

 $F: M = V: T \dots M$ Momentum of time F T = M V,

When a moving mass is suddenly stopped, the resistance it meets with is generally called the force of impact. The formulæ apply equally well in starting the mass from rest to motion as to bring it from motion to rest, and it will be perceived by Formula 3 that the shorter time T in which the mass is set in motion or brought to rest, the greater will be the force of impact. When the mass is set in motion or brought to rest gradually in a considerable time, the force is not called

In the practical application of these for mulæ the mass must be converted into weight W = g M. W Mass M =

g

g = 32.17, the acceleratrix of gravity.

The practical formula will then be, when
Formula 4 is inserted for M in Formula 3, as

Force of impact $F = \frac{W V}{g T} \dots 5$

Applying this to water moving in a pipe, W means the weight of the water in the whole length of pipe in pounds. V = velocity of the water in feet per second, and T = time in seconds in which the motion of the water is stopped. Formula 5 gives the force of invest in pounds.

force of impact in pounds.

In the case of a hydrostatic test of a steam boiler as above referred to, the water is driven through a pipe into the boiler by a force pump of known dimensions and operafor which the following notation is

a =area of the cross-section of the pump-

plunger. v = velocity with which the plunger

A = cross-section area of the pipe connecting the plunger with the boiler L =length of the pipe in feet. If A is expressed in square feet and the

weight of a cubic foot of water is 62.33 pounds at a temperature of 60° F., then the weight W of the water will be $W = 62.33 A L \dots 6$

Having given the velocity v of the pump plunger, that of the water in the pipe will be $V = \frac{a \, v}{A} \dots 7$

Now insert Formula 6 for the weight W, and Formula 7 for the velocity V in Formula 5, and the practical formula for hydrostatic

Force of impact $F = \frac{62.33 A L a v}{7}$ gTA 62.33 Lav 8

g TThis formula gives the force of impact on the whole area A at the boiler end of the pipe, which force is not indicated on the pressure gauge, but if Formula 8 be divided by the area A of the pipe in square inches and the area a of the pump-plunger also expressed in course inches then the force of pressed in square inches, then the force of impact per square inch should show on the

pressure gauge at the moment the motion of the water in the pipe is stopped.

The valve g divided into 62.33 is nearly 2 and can be practically so considered, and we have the force of :

Impact per square inch $f = \frac{2 L a v}{m}$ $TA \cdots 9$

This formula shows that the larger the area A of the pipe is, the smaller will be the force of impact per square inch in the boiler, and vice versa. The impact per square inch and vice versa. The impact per square inch is directly as the length L and inversely as the area A of the pipe. In hydrostatic boiler tests the pipe between the pump and the boiler is generally made too small, which inboiler is generally made too small, which increases the force of impact and may over-strain the boiler if the pump is worked fast. The diameter of the pipe should not be less than that of the plunger, but better to make it larger. Sharp bends and friction in the pipe, air in the water and elasticity of the materials of which the boiler is made con-siderably diminish the force of impact. siderably diminish the force of impact.

Long suction-pipes very often give trouble by force of impact, which can be avoided by an air vessel on the suction side of the pump. The hydraulic ram operates by force of impact, but the formulæ are different

pump. The hydraunc ram operates by force of impact, but the formulæ are different from those for a pump.

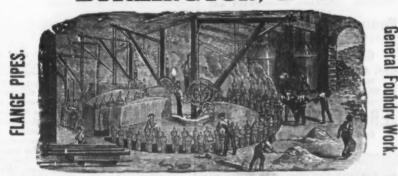
When a pump is worked by crank motion, the force of impact of the water in the pipe may be reduced to no importance, depending upon the length of the pipe, but the velocity of the pump-plunger and length of the pipe may be of such proportion that the momentum of the water cannot keep time with the strokes, which may result in bursting of the pipe if the momentum is not relieved by air vessels.

When the pump is worked by hand and a lever, the velocity of the plunger is nearly uniform to the end of the stroke, where it suddenly stops, and the momentum of the water continues with its force of impact.

impact.

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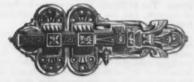
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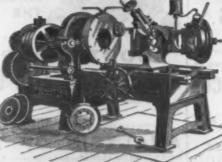
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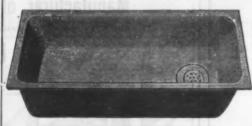
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p A

The strength and safety of cast-iron heads under steam pressure cannot be determined by cold-water pressure, because cast iron is a treacherous metal for that purpose, and its danger consists in shrinkage strain caused by sudden change of temperature.

The British Employers' Liability Act.

Notwithstanding the fact that the British Government lacks the broad elements of popular representation which obtain in this country, the rights of workingmen have been more carefully covered by legislation in Great British care of the workingman been attended by act of Parliament that it seems extended by act of Parliament that it seems as though the employer is now in need of as though the employer is now in need of sympathy from the governing classes. The liability of an employer for damages in case of an employee suffering personal injury while engaged in the discharge of his duties is the subject of a special act of Parliament, which was passed in order to make employers more watchful over the safety of those in their employ, though, of course, the law is intended only to take cognizance of cases of negligence on the part of proprietors of works. Still, there are very few instances works. Still, there are very few instances of actions brought under this law which are decided adversely to the employee. One of the most interesting cases of this character is reported in recent issues of English journals. As the circumstances were peculiar, a full account of the controversy and the decisions of the respective courts appealed to is herewith given. It will be understood that the employers of Great Britain have that the employers of Great Britain have formed an insurance company, under the Employers' Limited Assurance Corporation, Limited, in order to lighten the burdens of the operation of this act, which might occasionally bear very heavily upon indi-vidual firms or companies. An insurance question is therefore involved in this trial, but at the appreciate the lightifities of employbut at the same time the liabilities of employers for their workmen's injuries are very fully treated, as will appear upon careful

reading.
The title of the case was the Henry Rifled Barrel Engineering and Small Arms Company vs. the Employers' Limited Assurance Corporation, Limited. The action arose out of the explosion of a 16¼-iuch shell, which of the explosion of a 1614-inch shell, which had been brought by Lord Charles Beresford from Egypt, as a present, it is believed, for the Prince of Wales. The shell, which had been used on the voyage by Lord Charles Beresford as a candlestick, but ultimately turned out to be a live shell, though it had been fired into Alexandria, was sent by him to the defendants, who had consented to cut it in two, so that it might be made into an ornament. The shell, which was believed not to be so charged, was handed to a worknot to be so charged, was handed to a work-man, described as a fitter, who set to work to cut it in two. Finding that there was something inside it, he got an implement with which to scrape it out. Some of the RICHMOND, VA.

BICHMOND, VA.

Some more he placed on a board, and a person of curricusity threw some on the fire, which flared person of curricusity threw some on the fire, which flared with the result that the chimney was nearly blown out. The workman stated that the foreman said to him: "There is a hele at the foreman said to him: "There is a hele at the foreman said to him: "There is a hele at the foreman said to him: "There is a hele at the foreman said to him: "There is a hele at the foreman said to him: "There is a hele at the foreman said to him: "There is a hele at the foreman said to him: "There is a hele at the foreman said to him: "There is a hele at the foreman said to him: "There is a hele at the foreman said to him: "There is an explosion the hole is large enough to let it go out without hurting you." However, the workman continued scraping, with the result that a second explosion occurred, which is a second explosion occurred. the defendants, with whom they had insured themselves against claims under the Employ-ers' Liability act, 1880. By the policy the defendants agreed to pay sums for which the employers should be liable under the act of defendants agreed to pay sums for which the comployers should be liable under the act of 1880 as and for compensation for personal injury caused to any workman in their service while engaged in the employers' work in either of the occupations mentioned in the schedule specified the occupation of fitter. At the trial, before Mr.

The Outlook for Wheat.—There is no employers will exceed the average, says the Minneapolis 17:00 ne. That of 1881 was upward of 383,-00,000 bushels; the 1882 erop was in round in the schedule thereto. The schedule specified the occupation of fitter. At the trial, before Mr. occupation of fitter. At the trial, before Mr. lowest estimate for this summer's harvest is Baron Huddleston, a special jury found that that of the New York Produce Exchange, the workman was at the time of the acci-which places the figure at 468,380,000 bushdent in the employment of the plaintiffs in that occupation, and judgment was entered for the plaintiffs. The defendants moved for a new trial, and a divisional court was divided in opinion, Mr. Justice Day being of vided in opinion, Mr. Justice Day being of opinion that there was no evidence for the jury that the workman was engaged in any ecupation described in the policy. The re-lit, therefore, was that the judgment

The force of impact given by Formula 3 can never be greater than the resistance against the water entering the boiler from the pipe. Let p = hydrostatic pressure per square inch in the boiler.

Then we have the time T^i of impact to be: $T^i = \frac{2 L a v}{p A}$ to that, if the workman was in the employers work, whatever work he was engaged upon—that is, if he was doing something which the employers told him to do—he would be doing something while engaged in the employers work. The subsequent words as to the workman being engaged in either of the occupations mentioned in the schedule continued that, but applied to the workman This Formula 10 will be correct if the pressure p does not increase in the time T'; but if there is no elasticity in the materials of which the boiler is made, and the air in the water is compressed to a high degree, then the motion of the water in the pipe will be stopped in a shorter time than T', and thus increase the force of impact beyond the hydrostatic pressure from the pump, and the index on the pressure gauge will thus be suddenly pushed forward and returned to the normal pressure. If there be a maximum hand on the gauge dial, that hand may be carried forward by its own momentum far beyond the maximum force of impact, and thus indicate a wrong pressure.

These difficulties with hydrostatic tests can be avoided by making the inside diameter of the delivery-pipe sufficiently large—say one-and-a-half the diameter of the plunger.

The strength and safety of cast-iron heads under steam pressure cannot be determined.

Therefore the shell was taken in as of the receiver into from the schedule confirmed that, but applied to the work and not to the work. If the workman in and not to the work. If the workman in the pull to the work in the confirmed that, but applied to the workman and not to the work. If the workman in the pull to the work. If the work in the confirmed that, but applied to the work in the confirmed that, but applied to the work in the work. If the work in and not to the work. If the work in and not to the work. If the work and not to the work. If the work man in and not to the work. If the work in the toth to the work. If the work and not to the work. If the work in the toth to the work. If the work in the toth to do, and if he was either of the persons mentioned in the schedule confirmed that, but applied to the work in the work in the work in the work. If the work in the work in the work in the toth of the policy. For fear of the policy. For fear of the policy. For fear of excident his lordship whal that the schedule confirmed that, but applied to the work in the terms of the policy. Fo otherwise, and make it into something else. Therefore the shell was taken in in order that it might be dealt with in the way in which ordinary engineers would deal with it, and, therefore, so far within the business of the employers. There was evidence that it was fitters' work to cut up iron and make it into some other form. Therefore, the work-man was employed upon work which was part of the business of his employers, and upon part of the work which he was en-gaged as a fitter to perform. The jury were right in finding that he was working as a fitter. Therefore the employment was within fitter. Therefore the employment was within the terms of policy, and his lordship agreed with the judgment of Mr. Justice A. L. Smith, that the appeal should be dismissed. Lord Justice Bowen was of the same opinion, but was inclined to think that no personal injury to a workman, though he was engaged in the employers' work, would be the subject matter of indemity, unless he was engaged in one of the occupations. was engaged in one of the occupations described in the schedule, so that there would be no indemnity where a person engaged as a fitter was put to an occupation not described in the schedule. Lord Justice Fry also agreed that the appeal should be

The Sanitary Aspects of the Electric Light.

The good or evil influence upon the health of the artificial light we use, says the London Enginnering, is of the very highest importance, although hitherto it has to a great extent been overlooked. Ancient custom has so familiarized us with combustion as a source of light that until recent years we hardly ever dreamed there could be any other. Nevertheless, the introduction of the electric light has been opening our minds of late to the advantages of a purer kind of illumination. Pure air is what we all seek when we go to the seaside or the mountain top during our holidays. How important, then, is it that we should have pure air in our homes. The necessity which obliges us to live in towns also obliges us to live in a more or less vitiated atmosphere. The mere fact of so many living beings crowded together is of itself sufficient to deteriorate the air. Assuredly, sufficient to deteriorate the air. Assuredly, it is not desirable that the very light we use should also vitiate the atmosphere. Pure air and light are essential to good health, but in close, ill-ventilated city offices, and in thousands of homes and workshops, what prospect is there of pure air while the lights which are burned often half the day are of the property and the statements replicing it. For not called the second of the second described on the second described described on the second described described on the second described descr themselves polluting it? For not only does a candle oil, or gas flame waste the oxygen a candle oil, or gas flame waste the oxygen of the air, and thus rob it of its life-supporting virtue, but it actually soils it with noxious vapors, the products of combustion. These are chiefly water or steam and carbonic acid; but carbon dust, or soot, is also thrown off, and, in the case of gas, sulphurous acid. Gas and other lights produced by combustion not only rob the air of its health.

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Suit, therefore, was that the judgment stood. Thereupon the defendants appealed. It was now urged on their behalf that it was not part of the plaintiff's business to cut shalls, and that that was certainly not within the scope of a fitter.

Their lordships gave judgment dismissing the appeal, without calling upon the respondents' counsel. The Master of the Rolls said the average, which would, of course, considerably not seem to him to be a very difficult one to construe. The employers were to be insured against sums paid for injury caused to any workman in the employers' service while engaged in the employers' work. According bushels and the average importation at 110,-



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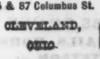
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oco,oco. The latter figure is probably too low. Good authorities would place England's importation in recent years at from 120,000,000 to 130,000,000. The State Department, in a recent report, estimates that during the current year 375,000,000 bushels of wheat will be moved from the exporting into the importing countries of the world, and that of this amount the United States should be called upon for 188,000,000, and all other exporting countries for 187,000,000. It is needless to remark that large figures of this sort should be received with very great cau-tion. It is of record that in the fiscal year 1882-83 our export amounted to 146,483,843 bushels; but of the future no man can say.

TRADE PUBLICATIONS.

The Porter-Allen Engine.

The recent catalogue issued by the Southwark Foundry and Machine Company, of Philadelphia, Pa., containing a very full description by Mr. Chas. T. Porter of the Porter-Allen engine, is beyond doubt one of the most attractive, well-arranged and interesting specimens of its kind. It embraces over 50 pages replete with illustrations showing different views of the engine, details of cylinders and valve gear, valve connections, bearings, indicator cards, &c., and contains, in addition to these and the accompanying descriptions, valuable chapters on such mat-ters as, for example, the action of the recip-rocating parts of the engine, advantages of high speed, conversion of heat into work in the cylinder, the attainable limit of economy and others of equal importance. The engravings are finely executed, the typography is excellent, and the catalogue, taken altogether, is a more than generally desirable one.

Steam Engines and Centrifugal Pumps.

Messrs. Heald & Morris, of Baldwinsville, N. Y., have sent in their illustrated catalogue of steam engines and centrifugal pumps, and which in addition gives particulars of several other appliances, such as the Craig sight-feed lubricator, pulleys, leather and rubber belting, &c. Interesting paragraphs are devoted to steam engines, steam engine economy, methods of adjusting their engine valve, and other matters of a similar character, the whole forming a valuable and well-arranged collection of hints and data. A separate pamphlet accompanying the cata-logue contains testimonials of their custom-ers in convenient order for reference, giving those relating to a particular size by them-selves, so that the different varieties of work being done by each size can readily be seen.
This list will undoubtedly prove interesting
to these contemplating the purchase of one
or more of Messrs. Heald & Morris's engines, showing just what they are doing and what results are being obtained.

Brown & Sharpe Manufacturing Company.

The new catalogue recently issued by the The new catalogue recently issued by the Brown & Sharpe Manufacturing Company, of Providence, R. I., is in every way an attractive specimen of trade publication, and its various illustrations, representing different types of machine tools and other appliances built by them, together with the descriptive particulars, will, without doubt, prove of a good deal of interest to some. Besides treating of milling and grinding machinery, gear cutters, lathes, &c., the catalogue embraces an interesting extract relating to standard gears, recently spoken relating to standard gears, recently spoken of in our columns, and in view of the increasing importance of the subject the matter here given will undoubtedly prove an acceptable addition to its literature.

An Improved Balance Dynamometer.

The Lawrence Machine Shop, Lawrence, Mass., have recently issued an interesting little pamphlet relating to an improved balance dynomometer now built by them. It contains a general view of the apparatus and gives a full description, which we think may possibly prove of interest to some of our readers. The pamphlet, we believe, is sent free on application, and those so inclined free on application, a may readily obtain it.

Machine Tools for Iron and Brass

Messrs. Warner & Swasey, of Cleveland, Ohio, designers and manufacturers of iron and brass working machine tools, have issued a very neatly-arranged and attractive cata-

The Whittier Machine Company.

The new catalogue of the Whittier Machine Company, of Boston and New York, manufacturers of elevators and boilers, was brought out a short time ago and can very justly lay claim to more attention than is justly lay claim to more attention than is ordinarily given to publications of this kind. Considered from the standpoint of both manufacturer and purchaser, it contains a most complete and serviceable representa-52 pages.

Hoisting Machinery.

Messrs. Edwin Harrington, Son & Co, of North Fifteenth street and Pennsylvania avenue, Philadelphia, Pa., have issued a neat little catalogue relating to their various ar-rangements of portable double-chain screw-hoisting machines and systems of overhead tramways. The publication is fully illed tramways. The publication is fully illustrated throughout, and the particulars given are such as to enable intending purchasers to readily make a selection of what they

The Keely Motor Stockholders.

Probably no other mechanical enterprise

was ever blessed with such a patient set of backers as the Keely motor. For years they have responded to frequent calls for money to enable the originator of the scheme to carry on his experiments, exhibiting a quiet faith simply inexplicable. But, according to a Philadelphia paper, they are at last growing tired. On the 29th ult., midnight, the officers and directors of the Keely Motor Company went into executive session at the Lafayette Hotel, Philadelphia, to discuss some very important matters connected with some very important matters connected with that corporation. The directors h.d. spent the evening with Mr. Keely at his Twentieth street workshop. The object of their visit was to learn from the dicoverer and inventor when he would be ready to give an exhibition, and to ascertain other points which the stockholders have been clamoring for. According to one to one of the gentlemen, letters have been pouring in during the past three months from stockholders who desire to know when the motor will be ready. to know when the motor will be ready. Some of these epistles have been very pungent, and insinuated in strong language that the directors are not doing their duty, that the directors are not doing their duty, and that money is being wasted with no prospect of a return. Mr. Keely has been appealed to time and again, and he has answered that he is hard at work and will not divulge anything until he completes the entire apparatus. He has locked up two rooms of his shop and refused admittance even to his workmen, so that no one but himself knows the real condition of affairs. Some of the stockholders threatened to call a meeting and take the matter in their own Some of the stockholders threatened to call a meeting and take the matter in their own hands, so far as they could, and, if possible, force Mr. Keely to make some public statement. The directors laid these matters before him, and also demanded to know when he would be ready and what they should say to the irate stockholders. The inventor received them and discussed the situation. The conference was a secret one, and the directors refuse to divulge their plans.

A Floating Coffer Dam.

An ingenious contrivance for the repair of An ingenious contrivance for the repair of vessels without dry-docking them is a floating coffer dam. At least one of these structures is in use at this city, and another has recently been built at Boston, where it was greatly needed. The arrangement is thus described by the Boston Commercial Bulletin.

Its use is in the repair of vessels which are damaged either at bow or stern. When it is remembered that at least nine-tenths of all marine mishaps occur at these points of a all marine mishaps occur at these points of a vessel, it will be seen that its field of usefulness is large. Nearly half of the accidents occurring are about the propellor and rudder post. Heretofore when such an accident was at all serious the repair bill has been very burdensome both in direct expense and in the delay. Such repairs were necessarily made in dry dock, which necessitated the shifting and storage of cargo meantime. The floating coffer dam is nearly square in shape, and is constructed throughout of the best hard pine lumber. It is 35 feet long, 32 feet beam at the gate end, and 28 feet beam at the closed end, while its depth is 24 feet. It will thus be seen that its construction must be sufficient to stand the enormous strain of 24-foot head of water. It is flat on the bottom and three sides are as square as a the bottom and three sides are as square as a box. The gate side is built V-shaped half its hight, while the upper half of the vast in-closure is shut in by huge gates, which swing on messive hinges and are so arranged as to offer no obstruction to a ship's propeller.

The dam is towed alongside the injured

vessel and sunk at either bow or stern, as the case may be. It is then fitted to the vessel so that the keel rests upon the bottom timbers of the dam and the vessel's sides fit into the V-shaped open end. Planking and layers of felting are fitted around the vessel, which is thus made to form the fourth side of the coffer dam. The dam is then pumped styles of machines turned out by them. It measures about 5 x 7 inches in size, covers 24 pages and will be found a very convenient pamphlet for those interested in this line of machinery. Accompanying the catalogue is an engraved card showing on one side an equatorial telescope made by them and giving on the other various matters of interest directly connected with lt.

of the coffer dam. The dam is then pumped out, and being relieved of its immense weight of water lifts the end of the vessels out of the water and leaves the injured portion as high and dry for repairs as if it were in a dry dock. It has the advantage over a dry dock that in cold weather it can be temporarily roofed over and heated so that it will serve all the purposes of a workshop. This is an important consideration in the fourth side out, and being relieved of its immense weight of water lifts the end of the vessels out of the water and leaves the injured portion as high and dry for repairs as if it were in a dry dock. It has the advantage over a dry dock that in cold weather it can be temporarily roofed over and heated so that it.

"A few years ago," says a correspondent of the Mechanical World, "a patent was taken out for a boiler somewhat resembling the Galloway boiler, and when one of the first was being examined under test (at the maker's yard, I believe) by an experienced inspector, the patentee was much surprised to hear from the inspector that an exactly simi-lar boiler was made 25 years before, and could most complete and serviceable representa-tion of what the company are now placing on the market, the descriptions being clear and concise, the engravings betraying great care in execution, and the general data submitted in execution, and the general data submitted concinical with fuel, while dirty feed-water, commical with fuel, while dirty feed-water, of a judicious selection. After a general introduction, referring to the increasing demand for rapid transit to the upper stories number of these boilers were made and sold of buildings and the growth of the elevator industry, short chapters on the minor details corrugated furnaces will no doubt be fresh industry, short chapters on the minor details of elevators, classification, speed, efficiency and comparative cost, elevator safeties, &c., the catalogue continues with an extended series of illustrations of the different styles of steam, hydraulic and belt elevators, automatic safety hatch-covers, ventilating fans to reason that matic safety hatch-covers, ventilating fans at that time large plates were not made, but for passenger elevators, elevator indicators, &c., and boilers and boiler settings. The catalogue is 10 x 12 inches in size and covers to reshauch the catalogue is 10 x 12 inch l are now again patented.'

ALC: COES

PAT. DEC. 26.1871

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FIRST, to surrender and deliver to the Attorneys for the said John Wilson, all knives now on hand, and in my possession, or under my control, bearing the said imitation trade-mark, and

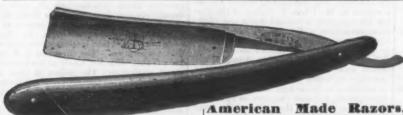
SECOND, I further undertake and agree to and with the said John Wilson, and his legal representatives, not to manufacture or sell, or cause to be manufactured or sold, at any time in the future, Knives or other Cutlery, bearing his trade-mark aforesaid, or any imitation or simulation thereof. IN WITNESS WHEREOF. I have hereunto set my hand and seal at West Mansfield, aforesaid, this thirty-first day of May, 1889.

WITHESS:

E. M. REED."
(Attorney for Defendant.) Imitation

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The Cholera and Business.

Speculation is already rife concerning the possible prevalence of Asiatic cholera in the United States, the time when its advent may United States, the time when its advent may be expected, and to what extent business interests may be affected. Aside from an advance in the price of certain kinds of drugs and disinfectants, the markets as yet show no appreciable influence, and as to the effect upon the grain markets which may be caused by the disturbance of labor in Europe, only the future can determine. United States Consul Mason at Marseilles has fur-States Consul Mason, at Marseilles, has furnished the Treasury Department at Washington with a valuable statement, somewhat in detail, respecting the origin and character of the disease, obtained from personal ob-servation and official data, from which we

extract as follows: Both Marseilles and Toulon suffered terribly in the cholera epidemic of 1865. During bly in the cholera epidemic of 1865. During the 19 years which have elapsed since then Marseilles has been, in several important respects, almost rebuilt. Her pavements, her sewerage system, her water supply and method of cleaning streets, removing night soil, inspecting and regulating the markets of food, her quarantine regulations and hospital facilities are all probably unsurpassed in excellence by those of any European or American city. The old quarter of the city, the ancient Marseilles, which was scourged so sharply by the plague in former centuries, has been pierced with broad avenues. has been pierced with broad avenues, streams of pure water flow down the gutters of the narrower streets and alleys, and the pavements of the principal thoroughfares are washed and swept with a care and frequency which leaves nothing to be desired. The terrible lesson of former epidemics has been well learned by the municipal government, and long before the first rumor of trouble at Toulon, Marseilles was cleaned and made ready for the summer heats. But with all the intelligent liberality which the city has evinced in the construction of her drainage system, there is an insurmountable difficulty which all Mediterranean cities are alike compelled to face—
their sewers flow into a tideless and generally
placid sea. The harbor of Marseilles is almost entirely artificial. The old port is
simply the estuary of a small creek, dredged
out into a large dock, with a narrow outlet
to the sea. The new ports are spacious harbors, inclosed by miles of piers and breakwater, and deepened to navigable depths by
dredging and excavations. Into these inclosed ports, which extend along two-thirds
of the shore front of the city, the entire
volume of sewage is poured, and as there is
only the surplus pure fresh water of the city
hydrants to dilute this turbid flow, and as
there is no tide to maintain a circulation of which the city has evinced in the construchydrants to dilute this turbid flow, and as there is no tide to maintain a circulation of sea-water through the inclosed ports, the inevitable result is that the latter grow foul and pestilent. The same conditions, unmitigated by equally vigorous sanitary measures, prevail at Toulon, and it is thought that it was the dredging of a disused dock there during the months of April and May which developed the seeds of the present epidemic. On the other hand—and this is but one of the many curiously contradictory features of this On the other hand—and this is but one of the many curiously contradictory features of this perplexing subject—it is assorted that the old port of Marseilles, the main cesspool of its sewage, was almost entirely exempt from cholera during the epidemic of 1865, but one death having occurred on all the shipping there assembled, and that was of a sailor who ever a recent his ship at midnight and who came on board his ship at midnight and lay exposed to the night damps and cold of until morning. It is stated in explanation this paradox that the miasma of that particular place acted, upon the homosopathic principle, as an antidote to the venom of the epidemic. But, however this seeming paradox may have been in 1805, the Marseilles government of to-day relies solely upon the most rigid and searching enforcement of rec-

ognized sanitary measures.

The dredging of the ports has been stopped and that source of miasma as far as possible abated during the summer. Since the outbreak at Toulon the whole city has been litbreak at 10010h the whole city has been in-erally washed with water and disinfectants, not once only, but daily and nightly. The markets are carefully inspected and immense quantities of stale and unripe fruit and vegestations, omnibuses, street cars—even hack-ney carriages—are fumigated and disinfected and the smell of chlorine, sulphates and car-bolic acid is everywhere. Château Pharo, ment to perform, under official direction, the most dangerous and menial services that may be required in treating the epidemic.

Twin-screw-engines are just now again being brought to public attention, and a good deal is being said for and against them as compared with the ordinary single-screw system. Failures of cranks and propeller shafts of ocean steamers, and the doubt as to whether a single screw can use up without enormous alip the large horse power developed in many cases, have repeatedly raised this question of relative merits, and definite information on the various points definite information on the various points embraced by it and derived from careful comparative tests would prove of the great-est interest and value. It is evident that the larger a shaft the more difficult it is to the larger a shaft the more difficult it is to make it sound, and the more likely is it that it will get out of line, and a division of power, with a consequent division of strain and diminished liability to break, thus naturally and favorably commends itself. Twin-screw engines offer these advantages, and practical experience with tham during years past ought to have been sufficient to dispel the obviously erroneous, but still prevalent, impression that they cannot be made to succeed mechanically. Space, cost and weight have been largely inscremental in deciding which system to adopt. Thus it is urged against twin screws that two engines are heavier and more coatly than one; that they take up more room, and that they require a larger outlay for attendance, repairs and lubrication. This is all true within cerand lubrication. This is all true within cer- season in 1882.

tain limits, but with increasing powers of engines, the great proportion of these items decrease in importance, and in such cases, when compared with the many points in favor of the twin-screw system, may almost be practically ignored. Taken altogether, then, the whole list of objections resolves then, the whole list of objections resolves itself into a question of room only, and while here the twin screw is unquestionably at a disadvantage, the importance of the point has never yet been definitely ascer-tained, and cannot well be taken as decisive, either in one way or another, until investi-gation shall have thrown further light on the matter.

Glass Pulleys.

An account relating to glass pulleys is now being very widely circulated. Accord-ing to this the pulleys are made in a mold, and have to be very straight and true to the model. They are about 13 inches in diammodel. model. They are about 13 inches in diameter and about 2½ or 3 inches wide, with a groove in the center of the rim to receive the cable. Only the rim or tire is of glass, the interior part being occupied by a spider made of iron, which fully supports the glass exterior, and likewise contains the hole for the reception of the axle upon which they run. The thickness of the rim from the surface to where the iron part comthey run. The thickness of the rim from the surface to where the iron part commences is about % inch. From experiments already made it has been proven that these glass pulleys will successfully resist any pressure brought to bear upon them; they will reduce friction to a minimum, and they will last an indefinite time. Cables on roads such as those referred to do not always remain on the pulleys, but sometimes, when in operation, are raised up, and upon being relaxed, strike the pulleys with considerable force; even under these adverse circumstance the glass has been tried and found to stance the glass has been tried and found to resist such violence without flaw or fracture, so that all objections to its use have been met and answered.

Glass will cost a little more than metal at first, but in the end will be cheaper. The cables used on traction roads are very expensive, some of them costing from \$100,000 up, so that the saving on these alone will amount to a large sum. The journals or bearings in which the pulleys run will also be of glass, and will need no oil whatever, a point much in their favor, as they are placed in an inaccessible position. This glass is made extra tough and strong, and the pulleys made extra tough and strong, and the pulleys now being manufactured at Pittsburgh are of a blue color, the parties ordering them preferring that tint. They could, however, be made of any other color as well. They take 72 hours to anneal, the average time for ordinary glassware being about 10 hours. Ordinary glass will not do, being too brittle and liable to fracture under sudden impact, and they have to be manufactured with great care. This firm make wheels and great care. This firm make wheels and other parts of machinery for various pur-poses of glass. One novelty is a guide over which the silk thread passes in the process of winding in silk mills. The thread runs of winding in silk mills. The thread runs through a groove in this gnide with such rapidity as to wear away iron or steel in a short time, but glass never wears out, and this firm are manufacturing thousands of them for New Jersey, Massachusetts and Connecticut silk mills. They are very small in size, but great numbers are required. The firm have now contracts on hand for cable firm have now contracts on hand for cable pulleys alone which will keep them very bus until July, and they are running full force.

The Russian Naphtha Industry.

An Odessa correspondent of an English paper, speaking of the growth and extent of the Russian naphtha industry, writes:

There exist at present in Baku about 400

There exist at present in Baku about 400 naphtha springs, sunk by hand to a mean depth of 50 feet, and 400 more, from 300 to 600 feet, mechanically bored. The productiveness of these springs is enormous, and 10,000 poeds daily is a low average for a single spring. The flow from many springs is astounding. From July 29 a spring on the estate of the Nobel Company produced in the early days of its eraption 400,000 poods daily, and in the course of some 12 days, until artificially repressed, 8,000,000 poods of oil were taken from this single spring. From another source, struck by the Drushba ney carriages—are fumigated and disinfected and the smell of chlorine, sulphates and carbolic acid is everywhere. Château Pharo, the Imperial palace built by Napoleon III. upon a promontory in front of the the city, has been converted into an hospital where all choleraic cases can be isolated and treated. An ambulance corps has been organized which patrols all parts of the city to provide immediate transportation for the stricken to this spacious and airy asylum. Industrial guilds and civic associations have offered their permanent services to the city government to perform, under official direction, which yet await further working. If in Baku the higher strata become exhausted, then the Russians, following the example of the Americans, will bore for the deeper strata. Russia is assured of the consumers of Persia and Central Asia. She will send her products over the Caspian and up the Volga, whence the railway will carry them to St. Petersburgh, Reval, Riga or Libau, and from there to the consumers of Northern and from there to the consumers of Northern Europe, and by Batoum and the Black Sea to Southern and Western Europe. The distance from Daku to Batoum is about 900 versts. At Baku a black town has sprung into existence, containing some 20,000 inhabitants connected with this industry. Capital is flowing in. In 1882 the freight dispatched over the Caspian was 25,000,000 poods, including 12,000,000 poods of petropods, including 12,000,000 poods of petrodispatched over the Caspian was 25,000,000 poods, including 12,000,000 poods of petroleum. During the present year the quantities dispatched by Batoum and the Black Sea are enormous. The finest petroleum may be purchased at Baku, without the barrel, of course, at 25 copeks per pood, or about 1 cent per pound.

The "Emery" Scale and Testing Machine.

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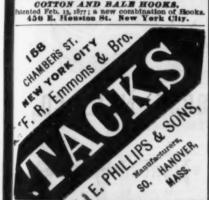
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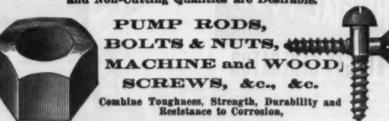
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LATEST LEGAL DECISIONS.

PARTNERSHIP-EXPENSES AND INTEREST.

In an accounting upon the dissolution of a partnership there was a dispute as to the authority to incur expenses and as to interest. Both parties appealed, and the Supreme Court of Michigan, in deciding the case—Sweeney vs. Neeley—through Judge Sherwood, said: "1. With or without the consent of one partner the other can expend any reasonable amount which he may deem any reasonable amount which he may deem proper in the legitimate prosecution of the copartnership business. 2. Unless it is agreed between partners before dissolution and final settlement neither is chargeable with interest on money he owes to his part-ner or to the firm arising out of the business transactions of the concern. We do not mean to be understood to say that there may not be equities existing between partners and equitable circumstances existing between partners before final settlement which would raise an implied agreement to pay interest.
3. Interest can never be allowed upon an unsettled or an unliquidated account without ar express agreement, or one clearly applied, and the case must be a strong one when it is between partners to warrant its allowance without an express agreement to that effect." SALE-FRAUD-CHANGE OF POSSESSION.

The purchaser of goods could not pay for them, and he sold them to persons who em-ployed him as a salesman. The vender attached the goods, claiming that the purchase and sale were fraudulent, and that the employment of the purchaser by his vendee was conclusive evidence of fraud as to the fraudulent sale by him. The trial court decided against the attachment, and the case—Grady vs. Baker—was carried to the Supreme Court of Dakota, where the judgment was affirmed. The Chief Justice (Edgerton), in the opinion, said: "The employment of the vender by the vendee after a sale may be proved as a fact tending to show that there has been no actual or continued change of possession; but when proved it does not of possession; but when proved it does not become conclusive of the question, but only an element of proof to be weighed by the jury. After a sale of goods and chattels, and an actual change of possession, the employment of the vender by the vendee, in the capacity of a clerk or salesman, is not in itself conclusive evidence of fraud which admits of no explanation. After a sale of goods and chattels, and an actual and notorious change of possession, the employment of the vender by the vendee as a mere clerk or salesman is not a fraud which vitiates the sale, for the change of possession is not continued."

CONTRACT BY LETTER

A loan was tendered to A, which was to be accepted by letter. The letter was writ-ten in a reasonable time, but the trial court instructed the jury so that they found that there was not a sufficient acceptance. The there was not a sufficient acceptance. The case—Ferrier vs. Stover—was carried to the Supreme Court of Iowa, where the judgment was reversed. Judge Adams, in the opinion, said: "The rule now supported by the great preponderance of authority, and almost, if not quite, universally adhered to, is that when a proposal is accepted by letter the contract is desmed to become complete when the letter. is deemed to become complete when the letter is mailed, provided the offer is standing and the acceptance is made within a reasonable time. The contract is deemed complete when the letter is mailed, because the mailing constitutes the overt act by which the accept-ance is manifested."

NEGOTIABLE INSTRUMENT.

An action was brought upon a promissory note to which there was a seal opposite to the signature, but there was no reference to the seal in the note. The trial court admitted evidence which was not competent if the note was commercial paper, and the plaintiff failed in his case. He carried it—Brqwn rs. Jordhall—to the Supreme Court of Minnesota, where the judgment was affirmed. The Chief Justice (Gilfillan), in the opinion, said: "The appellant contends opinion, said: "The appellant contends that merely placing upon an instrument a scroll or device, such as the statute allows as a substitute for a common law seal, without any recognition of it as a seal in without any recognition of it as a seal in the body of the instrument, does not make it a sealed instrument. Undoubtedly, where there is a scroll or device upon an instrument there must be something upon the instrument to show that the scroll or device was intended for and used as a seal. But it would be difficult to conceive how the maker of an instrument could better express that a device was intended for a seal more clearly than by the word 'Seal' placed within and made a part of it. The instrument in this case was an instrument under seal, and the defenses were properly under seal, and the defenses were properly

dance, their richness and their purity. are to be found almost everywhere in the center of the prevince; sometimes in outcrops of enormous extent, often worked into to a great depth by the gold miners in search of the precious metal; sometimes deposited in large masses in the bed and upon the banks of rivers, the floods of which carry them away and scatter them over other localities. calities. In many places they constitute the track of the roads, the dust of which sparkles track of the roads, the dust of which sparkles so brilliantly during certain hours of the day that the eye can scarcely bear to look upon it. So abundant is this ore, and so ready to hand, that large quantities of it are used as building stone; this is notably the case in the town of Ouro-Preto. All of these ores belong to the category of oligist iron. Arenaceous oligist iron ore, mixed with a few grains of quartz, and forming a very friable rock, are still worked for gold. A micaceous oligist iron ore, also mixed with quartz rock, are still worked for gold. A mica-ceous oligist iron ore, also mixed with quartz in fine grains, and forming a friable rock; a specular iron ore, sometimes found in mag-nificent crystals; and compact oligist iron ore of very fine grain, and forming an ex-tremely hard and tenacious rock, are other forms of this mineral. The fracture of the latter, where the gangue does not exist is forms of this mineral. The fracture of the latter, where the gangue does not exist, is like that of a bar of steel, except that the color is somewhat darker. There is also a conglomerate covering in a generally thin bed—a large extent of the country at the foot of the oligist iron deposits. This rock is locally known as "canga;" it is clearly formed at the expense of the other deposits, portions of the several rocks of the oligist. portions of the several rocks of the oligist iron, bound together by a red hematite cement, being easily recognizable in it. This rock is, as a consequence of its mode of formation, full of cavities. Being firm and strong, of the same composition and sensibly of the same richness as the ores whence they were derived, but porous, it seems to constitute an altogether exceptional ore, lending itself completely to the requirements of metallurgy.
All these ores are remarkably pure; they

are without a trace of phosphorus or sulphur. The only gangue appears to be quartz, but The only gangue appears to be quartz, but this does not exceed 5 or 6 per cent., except in the "canga," in which it may be in a little larger proportion. Manganese is always found in these ores, often only as a trace, but sometimes in considerable quantity—as much as q per cent. in some samples. These remarkable ores, equal, if not superior, to the best ores of Sweden, Algeria and the Pyrenees, may be had for the labor of picking them up. In some places they crop out from the hill sides, as at Pitanguy, for example, where, thanks to the labor of the gold miners, the outcrop of a bed 450 to 600 feet thick may be seen at one view over an extent of several miles. In other places, covering an immense extent of country, occurs tent of several miles. In other places, covering an immense extent of country, occurs the "canga," a superficial deposit the thickness of which is eften as great as 25 or 30 feet. Everywhere the streams carry down and deposit pulverulent oligist iron, ready washed for whoever will take the trouble to collect it. Mr. Gorceix estimates the mass of deposits at the foot of the Serra De Caraca at 8.000.000.000.000 tons. But without such estate. at 8,000,000,000 tons. But without such estimates, whoever has traveled through these regions must necessarily have come away with the impression that the deposits are practically inexhaustible.

Unfortunately for this country, so rich in metallic ores, no coal exists in the neighborhood of these deposits. Lignite of good quality is found in several places, and in beds of workable thickness. But this has only a future interest when the industry shall have been sufficiently developed to use the fuel in the gaseous form. But there is an abundance of wood, and wood charcoal must abundance of wood, and wood charcoal must be the fuel employed in the reduction of these iron ores. The extensive forests of the province of Minas are capable of supply-ing fuel on a large scale for many years to come without the material rising much in value. Hence it will be possible to carry on metallurgical operations for a long time very cheaply by means of wood fuel. It may be added that water-power is abundant and easily utilizable in this mountainous country. At present the means of transport are insuffi-At present the means of transport are insufficient, but a railway will shortly be completed up to the boundary of this mineral district, and commercial enterprise only is needed to continue it into the heart of that region.

A Central American Railroad.

The completion of the Central American Pacific Railroad from the ocean to Guatemala City—70 miles—was announced July 17 by cable. The road, observes the Railway cable. The road, observes the Railway Review, has been built by United States capitalists. It opens railway communication instrument in this case was an instrument under seal, and the defenses were properly set up."

Deposits of Ire Ore in Brazil.

The following account of the iron-ore deposits of Minas-Geraes, Brazil, by A. de Bovet, is from an article in the Annales des Minas, the translation appearing in a recent issue of the London Iron Trade Exchange:

The high and mountainous region which forms the center of the province of Minas is peculiarly rich in mineral deposits. Its diamond fields have long been known as among the most productive in the world, and they are vigorously worked, though the primitive method of extraction is still followed, and the unsystematic conduct of the operations do not lead to the greatest profit obtainable from this source of wealth. The auriferous deposits are both rich and extensive, and these might be made to yield gold in paying quantities under an economical system of working. Some of the richest are in the hands of English companies, chief among which is that of the Saint John Del Rey mines. Lead ore, rich in silver, also exists in several places, and graphite plumbago of good quality has been discovered. But less generally known is the fact that

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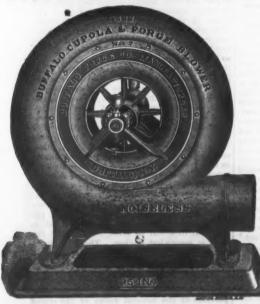
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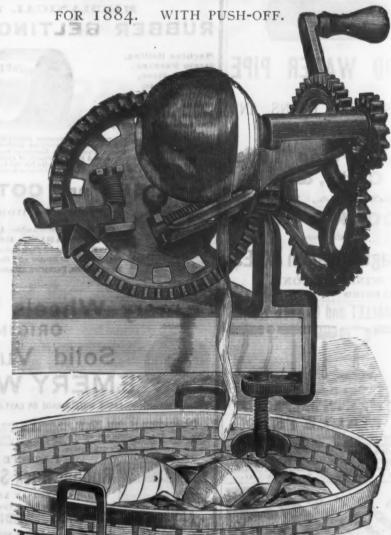
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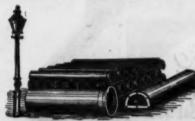
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He Forgot to Put in the Wires.

Under the above head one or two good stories come from Washington connected with the laying of underground cables there: The Bankers' and Merchants' Telegraph Company in that city are putting their wires under ground. A short time ago they made a discovery that was amusing to others, but not to the man having in charge the ucderground work. He had completed the work for four squares when a thought struck him. He was very sorry that he had not been struck by it before. He had made the underground receptacle for the wires, and covered it over according to the most apcovered it over according to the most approved methods, but he had neglected to put in the wires or anything by which they could be pulled through. He tried air pressure and everything he could devise to force a wire through the underground trough. But nothing availed. The whole thing had to be taken up and work done over again. Mr. Morrill Marcan, manager of the Washington office of the Western Union Company, referring to this incident, remarked; "It reminds me of the time they had in London." referring to this incident, remarked: "It reminds me of the time they had in London in 1857 or 1858. The telegraph wires in that in 1857 or 1858. The telegraph wires in that city have always, for the greater part, been under ground. The main wires are laid through the big tunnels, which accommodate also the gas and sewer pipes. These tunnels are big enough for a man to walk through easily. Of course there is no trouble about inspecting the wires or repairing or replacing them whenever it becomes precessary. But inspecting the wires or repairing or replacing them whenever it becomes necessary. But the pipes containing the lateral wires, running off for two or three miles from the main line, are small ones. At the time of which I speak one of these lateral wires was hauled out to be repaired. The men doing this work failed to attach to it a leading line, which the wire could be drawn through. by which the wire could be drawn through again. The means employed to correct the error were very unique. A large rat, with a fine steel wire, was put in the pipe. Behind there was thrust a ferret. The rat ran from the ferret a short distance and stopped. It was feared that he would show fight and be killed. But he started on again. He ran killed. But he started on again. He ran through the whole length of the pipe and brought out the wire in good style, though closely pushed by the ferret."

Shipbuilding in Sweden and Norway.

It is a singular fact that Sweden and Norway are now the only countries in the world that are increasing their sailing fleet. While teamers in every other country are supsteamers in every other country are sup-planting sailing vessels year by year, in the Scandinavian merchant navy steam is almost at a standstill, and sailing vessels are steadily built and navigated at a profit. The Swedish Government shipping statistics, just pub-lished, are interesting in connection with this matter, and from these we gather the following particulars:

The total number of vessels of all kinds, and their capacity, from 1830 to 1881 (the latest date to which the statistics apply) are shown in the table below

| 1880. | | | | | ٠ | | | | | | | | | . , | | | | Vense 1,841 | alm ! | ١. | Capacity, tons. 183,446 162,528 |
|----------------|--|---|---|-----|-----|---|----|---|---|------|-----|-----|-----|---------|---|---|---|----------------|----------|----|--|
| 1840. 1850. | | | 0 | | | 0 | 0 | , | 0 | | ۰ | 0 1 | | | | | | 9.74 | ă. | | 900 197 |
| 1860. | | | • | | | | | | | | | | | | | | | 3,20 | i | | 985.763 |
| 1870. | | | | | | | | | | | | | . , | | | | | 3,37 | 3 | | 846,862 |
| 1880. | | 0 | ۰ | 0 - | 0.1 | | | | | | . , | | | | 0 | 0 | ۵ | 4,33 | 3 | | 542,642 |
| 1881. | | ۰ | | | | | | 0 | | 1.4 | | | | . 0 | | ٥ | 0 | 4,151 | ı | | 529,613 |
| em. 1 | | | | | | | ٠, | | | | | | _ | _ | | | | | | | |

trade abroad from 1877 to 1881 were

| | Sailing vessels. | Tonnage. | Steamers. | Tonnage. | Horse- power. |
|------------------------------|---|---|---------------------------------|--|--|
| 1877 1878 1879 1860 | 1,815 1,850 1,908 1,968 1,907 | 871,145 892,254 882,742 400,542 400,608 | 167 169 170 165 162 | 56,978 55,278 55,069 55,069 58,645 | 11,029 11,407 11,476 11,838 11,810 |

These vessels earned in 1881—the sailing tirely. vessels 33,957,148 crowns, and the steamer 11,906,000—together, 45,863,148 crowns, or at 27 cents, \$12,383,050 of our money. British trade 11,850,924 crowns were earned; in French, 4,604,756, and in German trade 3,747,846. In our own trade with foreign countries the Scandinavian flag participates largely. The sums of money remitted home by Swedish consuls alone for account of sailors in 10 years have ranged as under:

| | | | | | | | | | C | rowns. | | | | | | | | | | owns |
|-------|---|--|---|---|---|---|--|---|---|--------|-------|--|---|--|---|---|---|---|--|--------|
| 1873. | | | * | | | | | | | 82,260 | 1877. | | × | | | | è | * | | 67,67 |
| 1878. | | | | | | | | ۰ | | 48,860 | 1878. | | | | | | | | | 81,754 |
| 1874. | | | | ۰ | , | | | | | 57,900 | 1879. | | | | | ì | | | | 86,267 |
| 1875. | | | | | | | | | | 71,560 | 1880. | | | | _ | | | _ | | 80,017 |
| 1876 | * | | | | | , | | , | | 85,751 | 1881. | | | | | | | , | | 84,045 |

Including captains, the Swedish merchant

interfere with the most economical building As Scandinavia trade of vessels possible. As Scandinavia trade with the outside world is not large enough to with the outside world is not large enough to employ even 20 per cent. of all the seagoing vessels under the Swedish and Norwegian flags, international trade has become the great field for these vessels, built so cheaply and so economically and well navigated that no other flag seems to be capable of competing with these vessels in the long run. At any rate, whatever may take place with the merchant marines of other nations in the change from sail to steam, Scandinavia forms an exception and proves that even sailing vessels will pay in competition with steamers if those building and running them know how to avail themselves of the natural and other advantages at command.

Capt. John Ericsson.

Captain Ericsson, who designed the famous Monitor, is not only still living, but is as hard at work as ever. On the 31st ult., he completed his 81st year. A reporter of the New York Herald says of him:

He is, as he has been for many years, one of the most eccentric as well as one of the most brilliant men in New York, but personally is not as well known as he would certainly be if he did not lead a life of almost absolute seclusion. From the time when his little turreted ironclad, the Monitor, engaged and destroyed the formidable Confederate ironclad, the Merrimac, Captain Ericsson's name has been almost a household word, but comparatively few people have a notion of what he looks like or how he lives. Buried in his work, he spends his time in his old-fashioned house at No. 36 Beach street, opposite what was once St. John's Park, and seldom goes out or receives visitors. The house is plainly furnished, almost without ornaments, but containing numerous large working models of his many inventions. Among these are caloric engines, the steam fire-engine, astronomical instruments and ironclad war vessels.

Captain Ericsson looks like a page from one of Marryatt's movels. His voice is louder than an ordinary fog horn, and his be greatly excited at almost all times. When a reporter caned on him recently to learn something about the Destroyer, the learn something about the Destroyer, the inventor came into the parlor after some delay and explained matters very court-cously. He is weather-beaten, but vigorous. His face is that of a typical old-time sea captain. His bushy whiskers are brushed forward, but the face is shaved clean to the margin all around. The day was very hot, but Captain Eriesson wore in his own parlor an overcast and a black silk hat with a an overcoat and a black silk hat with a tremendously wide brim. His vest and oldfashioned cravat were of buff linen, and the fashioned cravat were of buff linen, and the cravat hid his collar and shirt front completely. On the coat were brass buttons. He seems to be and says that he is in the prime of life. He works incessantly, lives temperately on vegetables and bread, and practices strictly regular habits. So far as indications so he is likely to work for so or indications go he is likely to work for 30 or 40 years longer. His latest perfected work is the Destroyer, which he claims will demolish any other ironclad vessel affect. He is now engaged in solar observations by which he proposes to prove beyond question that Sir Isaac Newton was right in his cal-culations when he asserted that the temperature at the sun's surface was several millions of degrees Pahrenheit.

The Proposed Spanish - American Treaty.—The condition of the negotiations for a commercial treaty between Spain and the United States is shown in the following cable dispatch from London, under date of the 29th ult: In Madrid the opposition to the proposed commercial treaty between the proposed commercial treaty between Spain and the United States is increasing Spain and the United States is increasing among the leading members of the Cabinet. It is not yet publicly known just what transpired Saturday during the long interview between Sefior Canovas Del Castillo, the Prime Minister, and Mr. Foster, the American minister. It is stated, however, that the result of the interview has been highly unsatisfactory to Mr. Foster. It is certain that the opposition against the treaty, which had been held in check pending this conference, has now broken out afresh and with The number of Swedish vessels engaged in rade abroad from 1877 to 1881 were:

ence, has now broken out afresh and with increased vigor. Señor Canovas, who was understood to have been strongly in favor of understood to have been strongly in faver of the treaty, is now opposed to it, although he maintains a lukewarm support. Señor J. Elduayen, the Minister of Foreign Affairs, has placed himself at the head of the oppo-sition and is doing all in his power to thwart the efforts of Mr. Foster. Señor Eduayen vehemently warns the Spanish Government that if the proposed compressed facilities are that if the proposed commercial facilities are ests in the Cuban trade will soon perish en

Eastern Glass-Blowers' Wages.—The Philadelphia North American states that at a meeting held on the 29th ult. at the St. Cloud Hotel, between the glass manufacturers of New Jersey and Eastern Pennsylvania and their employees, for the purpose of arranging the scale of wages for the coming year, a compromise was effected by which the men will receive an advance of 5 per cent. over last year's scale. They demanded an increase of 10 per cent. for blowers, and nearly the whole day was spent before a compromise was effected. Another paper states that the men asked also that gatherers be given 2½ per cent. for carrying out the rolls, and that the manufacturers agree to run their blasts through 10 months. These Eastern Glass-Blowers' Wages .- The Including captains, the Swedish merchant navy was manned in 1881 by 23,622 men. Scandinavian vessels and their captains have an excellent reputation abroad, and no better navigators than these men sail the seas.

In order to account for the fact that the building and navigation of sailing vessels is even to-day a prosperous business in Sweden and Norway, and on the increase, we have only to consider the abundance of suitable timber down to the water's edge all along the extensive Swedish and Norwagian coests, Atlantic and Baltic, which from time immemorial has singled out Scandinavia for shipbuilding, and that capital is more easily procurable for this industry there than anywhere else. Vessels are built on small shares and navigated by captains who have an interest in them. The Swedish tariff, moreover, is so managed that it does not



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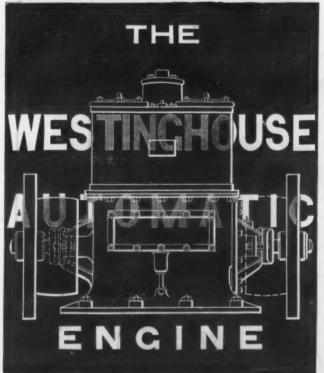
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INDUSTRIAL ITEMS. CONNECTICUT.

A large machine shop and foundry belong-ing to Barnum, Richardson & Co., of Lime Rock, were burned last Sunday morning Total loss, \$85,000; insured for \$60,000. The firm will rebuild at once.

MASSACHUSETTS

The New England Awl and Needle Factory, West Medway, has started up after the customary suspension of two weeks to make necessary repairs.

Some of the largest stand-pipes in this country have been built by the Cunningham Iron Works, of Charlestown. Specimens of their work can be found at Athens, Ga.; Wyandotte, Kan.; Alliance, Ohio, and numerous points in Massachusetts and other Eastern States. In 1879 they erected the great stand-pipe for the high-service pump-ing station at Ninety-eighth street, New York, which is 157 feet high.

NEW YORK.

The great girder which is to sustain the roof of the new Real Estate Exchange, in New York City, is 45 feet long, 5 feet high, weighs 20 tons, cost \$5250, and is intended to stand a strain of 250 tons. It will carry the whole of the western wall of the Marquand Building in the strain of 250 tons. ing, in Liberty street.

On the 4th inst the Post Office Department awarded to the Hall Safe and Lock Company, of New York, a contract for supplying 27 fire and burglar proof safes for post offices in different sections of the country, at a cost of \$11,163.

The Buffalo Forge Company, whose products are found in the shops of this country from Maine to California, are proving their present prosperity and their faith in the future by building an addition 75 x 185 feet—doubling their present capacity. doubling their present capacity.

PENNSYLVANIA.

The charcoal furnace at Jefferson, near Auburn, Schuylkill County, owned by Hon. J. M. Kaufman, was blown out on the 28th ult., to make repairs that have been contem-plated for some time. He expects to be able to resume work in a month or six weeks.

The recent fire at the open-hearth steel works of the Cambria Iron Company, Johnstown, did not necessitate any loss of time, as a tempoporary hoist was put up at once and A new hoist is in process of construc

A puddling furnace in the rolling mill of the E. & G. Brooke Iron Company, at Birdsboro', recently exploded, doing considerable damage to the mill, but injuring no one. It is rumored that the whole works are shortly to be shut down for repairs—not, of course, at all on account of the accident, which was of comparatively little consequence

The pipe mill of the Reading Iron Works en closed for an indefinite period.

The new addition to the Union Foundry and Machine Works, Catasauqua, has been completed, and an upright engine and large lathe erected and drill arranged for properly dressing the immense columns now in process of manufacture for the Philadelphia Gas Works. By the new addition considerable labor and time are saved, and the regular work of the machine shop is not inter-fered with, obviating night work and greatly facilitating the operations of the company.

A new building for the storage of sand is also being erected.

The bar and guide mill of the Allentown Rolling Mill Company, which was idle last week, resumed work Tuesday morning. About 75 men are employed.

George H. Anderson, the assignee of A. O. Tintsman, offered the Mount Braddock Coke Works for sale at the court house at Uniontown, Fayette County, on last Friday, but, receiving a bid of only \$1300, adjourned until August 8.

The coke operators along the Baltimore and Ohio Railroad between Mt. Pleasant and Broadford were seriously troubled during last week on account of the water. Some of the ovens have been almost flooded.

A general reduction of 10 per cent. in the wages of the employees of the Scranton Steel Company went into effect on August 1.

Titusville is to have new steel and iron works, the Eames Petroleum Iron Works plant having been purchased by Burgess, Garrett & Co. It is not their intention to manufacture the ordinary grades of iron and steel, but special grades of both. They will also make a self-hardening steel equal in quality to the celebrated Mushet steel. This iron and steel is all made by an entirely new process, which is a secret with Mr. Burgess. The company will rearrange the plant at the Eames Iron Works, increase the furnace capacity, and add a large quantity of new machinery. Work will be commenced immachinery. Work will be commenced immediately, but it will require a month or six week and a large expenditure to put the works in condition for business.

PITTEBURGH AND VICINITY.

About 3,000,000 bushels of coal went out on the rise last week in the rivers-an extraordinarily large run for this season of the Vear.

The United Coal and Coke Company have had their charter amended, which changes their place of business from Philadelphia to Pittaburgh.

GAS

AND

PIPES.

The notice given to a large number of employees at the Westinghouse Air Brake Works, in Allegheny, that their services would not be required after Saturday, August 2, created considerable excitement, and has caused much speculation as to the reason. The explanation is very simple, and does not recent that horsiness is dull at all. The number of the horsiness is dull at all. mean that business is dull at all. The num mean that business is dull at all. The num-ber of men who quit Saturday is 175, accord-ing to Superintendent West, and not 235. The company had a contract with the Con-tral Pacific and Union Pacific railroads to furnish a very large number of brakes for freight cars. The works were turning out 30 sets per day of brake fixtures, but the railroad companies desired the contract com-pleted more rapidly, and the output was in-S. Tretheway, 49th Street Tool Works, Pittsburgh.

It is large confirmation of the Company, at one of the states Rolling Stock Company, at one of the stat

other large contracts that are pressing, 175 of the new men have been dropped. It includes machinists, molders and laborers in about the usual proportions. The regular force of 450 men is retained, and will be kept at work as usual, and if more large contracts come in that are urgent the discharged men will be re-employed.

Singer, Nimick & Co. will have completed by October 1 an addition to their works, to be used for rolling thin gauges of steel for special purposes.

The stove molders' strike continues. Haven & Co. have been having considerable trouble in endeavoring to run their works non-union, from the interference of union men with their employees. They have had to apply for police protection, and have had two of the strikers arrested for pointing weapons.

VIRGINIA.

Low Moor Furnace, at Low Moor, Alleghany County, made 22,726 tons of pig iron from January 1 to July 19, 1884, an average production of about 812 tons per week. The largest product was 873 tons for the week ending July 19, and the least was 701 tons the second week in January.

Victoria Furnace, near Goshen, is now being relined and will go into blast about September r. A large force is now at work in the mines that supply this furnace, so that it will commence operations with a large stock of ore on hand, which will be needed in view of the increased capacity for produc-tion the refitted furnace will have.—The Virginias.

The temporary embarrassment of the operators of the Gem Furnace, at Milnes, has been relieved, and work was resumed at the furnace on last Monday. President Milnes made an address to the men last Thursday, made an address to the men last Thursday, frankly stating that, owing to the failure of companies in the North, and the consequent unsettled condition of the money market, that he had been unable to get money to pay them off, but if they were willing to trust him he would say that if they would go to work he would sell the iron and appropriate work he would sell the from and appropriate every cent of it to the payment of their dues. Every man promptly and cheerfully accepted the proposition and went to work last Monday, as above stated. We learn that there is an abundance of ore already mined and at the furnace to last several months, which will make iron enough to pay all obligations due by the company for labor. Our informant states that the company are confident that their troubles will be fully passed by the 20th of August, and that then work will be regularly resumed.—Page

NORTH CAROLINA.

The North Carolina Car Company, of Ra leigh, are constructing the Exposition Building for the fair to be held at that city in October. The building will cover 71,000 square feet, and they will use 600,000 feet of lumber in its construction. The company are enlarging their capacity for constructing cars, &c. They use Goodell & Waters' car machinery, of Philadelphia.

Gen. J. T. Wilder, of Chattanooga, in-forms us that the report to the effect that he contemplates building a blast furnace at Bristol is untrue. He has no intention of building a furnace anywhere.

Merriwether & Hatch, of Clarksville, contemplate the removal of their plow factory to Nashville. They are organizing a com-pany for the purpose of securing more capi-tal to enable them to carry on a very extensive business.

ALABAMA

The Victoria Burnam Grate Company have decided to erect their foundry at Birmingham. The necessary ground, 100 x 160 feet was donated by Dr. Caldwell, of that city and lies contiguous to the works of the Bir-mingham Rolling Mill Company and Sloss Furnaces.

OHIO.

The Jefferson Iron Works, of Steubenville on July 29 began to manufacture a trial lot of steel nails, buying the steel blooms in Pittsburgh. Three hundred and fifty kegs were made as an experiment, which was entirely successful, the nails being cut as easily as iron, and were smooth and perfect. If there is a demand, the company will manufacture steel as well as iron nails. The boiling department of the works has shut

of the mill.

The mill structure of the Kelly Nail Works, at Ironton, is up and the repairs to the boilers are going on. It is expected that the mill and factory will be running next week.

The forge department of the Belfont Iron Works Company, at Ironton, has been put in operation, and the plate mill and nail factory will resume in a week or two.

The Manning Novelty Company, of Youngstown, are experiencing a large de-mand for their specialties, and contemplate the erection of a large building in a short time for their own use.

The Pierce Manufacturing Company will commence the operation of the evaporator works in Warren early in August.

The Akron Sewer Pipe Company were recently awarded a \$20,320 contract by the Commissioners of the District of Columbia.

The Buckeye Engine Company, Salem, have orders ahead for 19 engines, none less than 125 horse-power.

All the rolling mills of Youngstown, with the exception of those of Brown, Bonnell & Co., are running to nearly their full capacity. ILLINOIS.

Chas. F. Elmes, of Chicago, has just se-

and machinery constituting the equipment have been purchased and are to be delivered in October. Fifteen hundred men will be employed.

Next month the Bergen Tool Company, of Batavia, will bring out some new and improved bolt machinery. Their works are ow being run on full time.

The rolling mill at LaGrange was attached on July 27 by George Bartlett, of LaGrange, to secure a coal bill for \$400. The mill is owned by the McKinney Tubular Rail Company, of Chicago, who secured a deed for the property from the LaGrange authorities about three weeks ago.

The building, recently completed, of the Morden Frog and Crossing Company, at South Chicago, is 300 feet long and 100 feet wide

The South Chicago Dock Company contemplate the erection of mammoth ware-houses for the accommodation of the wholesale grocery and heavy hardware trade of the city. The plans are not yet settled upon, but it is the intention to make the arrange ments for storage and shipping as complete as possible.

MISSOURI.

The Laclede Mills, of Chouteau, Harrison & Valle, which shut down last week for repairs, will probably remain idle until about September

The St. Louis Saw Works are restarting after a two or three weeks' stoppage, during which time a new furnace was put in and neccessary repairs on plant made

But four of the 17 blast furnaces of Misouri are at present in blast.

The St. Louis Stamping Company are erecting a 40 x 180 feet addition to their Granite Iron Rolling Mills, to which, when completed, will be removed their galvanizing works, which are now located at their down town factory. The rolling mills are down town factory. The rolling mills are at present shut down.

MICHIGAN.

The Leonard Glass Works, of Detroit, shut down on July 5 for repairs to the furnace, and also to enlarge their capacity for handling glass insulators

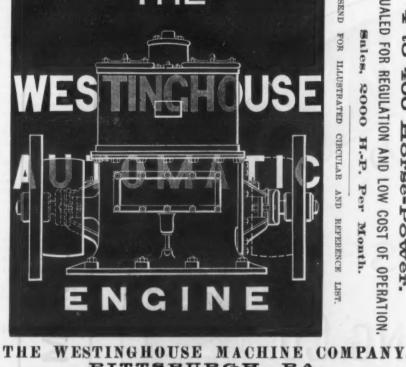
Activity in Russian Sheet-Iron Mills. It is reported from Russia that the sheet-ren mills are doing a brisk home business, which is ascribed to the increased Russian tariff telling against the importation of Eng-lish iron of inferior qualities. The Russian sheet-iron industry is a very old one, the sheet-iron industry is a very old one, the mines and works of Prince Demidoff having a long historical record. The most cele-brated, however, of the Russian polished sheet iron is that from the Jacalouf Works. There are two works bearing this name There are two works bearing this name. "Within the last decade," says the British Trade Journal, "the price of Russian iron in America has declined almost 50 per cent., and it is a remarkable fact that, though several of the largest English merchants have commissioned the leading English, Belgian, Westphalian and Swedish mills to make an imitation Russian iron, none have make an imitation Russian iron, none have ever succeeded, and to American genius the credit of making an excellent imitation article is alone due. It is stated that the process of giving it its gloss in the works in the Ural Mountains, Russia, is a secret. Whether this is really so remains to be seen. An interested English firm once made an inquiry to this effect at headquarters, and received the laconic reply, 'The lustrous surface is due to elbow-grease.

An Unusual Wages Claim.—We take the following statement from the Philadelphia Record for August 1: The iron sidewheel steamship, Heroe, Captain Hudson, built by the American Shipbuilding Company for Pedro Scandella, of Cludad, Venezuela, was seized yesterday by United States Marshal McMullin, of Delaware, on a writ of libel, issued at the instance of the crew, to recover full wages under the claim that the vessel is unseaworthy. She left for Cludad via Port of Spain, Trinidad, on July 6, and after leaving the Delaware Capes followed the Gulf Stream for more than a week, when Guil Stream for more than a week, when the captain put back by reason of the imper-fect action of the vessel's machinery, which slipped to and fro with the motion of the ship. She put into Cape May for repairs and finally reached Delaware City, where she was libeled. On Thursday night of last week, while the vessel was proceeding up the Delaware Bay the option crow were readly. Delaware Bay, the entire crew were nearly blown up by an explosion of the boilers, re-sulting from an insufficient supply of water. The action of the crew is based on the pro ons of a statute which allows wages for a full voyage upon a vessel becoming unsea-worthy, even though the port of destination has not been reached.

It is said that West Australia, with 30,766 inhabitants and an area of 1,009,000 square miles, has 92 ½ miles of railroad, or 1 mile by companies and engaged in carrying timber to the coast, which may be preber to the coast, which may be presumed to earn some profit, else they would not be worked; but neither of the roads owned by the Government has earned its working expenses. South Australia, which extends entirely across the continent from the south to the north coast, with the enormous area of 935,000 square miles, has a population of 310,650, which is 311 per mile of railroad. 310,050, which is 311 per mile of railroad. The expenditure on railroads per inhabitant was £20 12s. (\$103), the average cost per mile of the 945 ½ miles at the end of 1882 having been £6520 (\$32,600). Small as it was, however, the net earnings were but 2.56 per cent. on this capital, and the balance had to be made up by taxation. Several of the roads did not earn their working expenses. roads did not earn their working expenses.

Compared with the Vendome column in Paris, the Bartholdi statue is higher by a few feet. Compared with the largest other statue of which the hight is known, it is cured an order for the construction of 20 additional Harrison coal-mining machines.

It is intended to have the works of the of Lake Maggiore. The hight of the Colos-



PITTSBURGH, PA. RALES ROOMS.—94 Liberty St., New York; 401 College St., Charlotte, N. C; 401 Elm St Dallas, Texas; 53 South Market St., Nashville, Tenn.; Fairbanks, Morse & Co., Chicago, Clevelan Cincinnati, Louisville and St. Paul; Fairbanks & Co., St. Louis, Indianapola and Denver.

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IDEAL MOUSE TRAP.

So perfectly simple in const-action there is nothing to get out of order, as is the case with all other traps made on this principle. Guaranteed to give perfect satisfaction. Send for sample gross and you will not have any other trap that catches mice alive. The inventor of the Ideal invented all of the leading traps in the market today, and he says this one is perfection. Great care is taken in the manufacture of the Ideal, and every trap is perfect. A single trap for inspection will be sent by mall upon receipt of acc. in stamps.

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STEAM.

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WATER Awarded first and only Prize, Silver Medal, at the late National Railway Exposition. Send for Illustrated Famphiet, and mention The Iron Age.

ROLLING MILL TOOLS. Roll-Turning Tools, Roll-Turning Plugs.

Shear Knives, Circular and Straight, made from SPECIAL STEEL.

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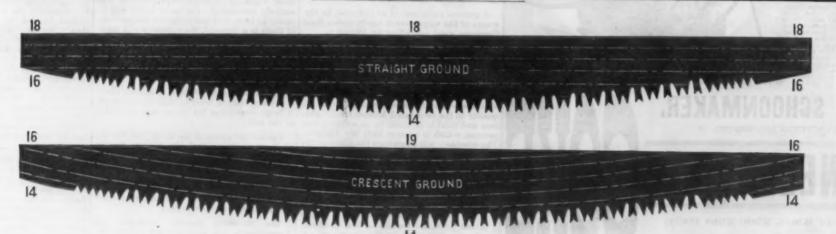
1881.

1881.

Only Gold Medal Awarded on Saws.

JUDGES' REPORT.

Best Display of Solid Tooth Circular Mill Saws. Recommended for Good Workmanship and Material, Superior Temper and Method of Tempering. And the Committee recommend a Special Award of a GOLD MEDAL.



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We guarantee that the Crescent-Ground Cross-Cut Saws will cut 10 per cent. more timber, same labor being used, than any other brand of Saws made; and we warrant the temper unequaled in quality and uniformity.

SIMONDS MANUF'G CO.,

FITCHBURG, MASS.

CHICAGO, ILL.

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motion of differential of one role of the pen of a line, edge of transmittal engage of transmittal experiments according and also a the spring to four possible and can be manight for a Attache specially a belt angle. The belt at graduation of the tens of the tens the center There as speed: I. gear wheel

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of a minute eading to the diagram of pencil mover at I his amoun The max Hence, at the encil mover or a power at I his amoun The max Hence, at the encil mover a power at I his amount to the max Hence, at the encil mover at the encil mover a power at the encil mover a power at the encil mover at th

Wale's Portable Dynamometer.

The Electrical Supply Company, of No. 117 Dey street, New York, have placed upon the market a new portable dynamonacy, design of Mr. George Wale, of Jersey City, N. J. This apparatus offers to the expert a reliable means of measuring power transmitted by a belt by attaching directly to the latter an instrument whose use requires neither the unlacing of the belts nor the losening of the pulley on the shaft. The horse-power transmitted is measured by the trace of a pencil upon a paper-covered drum, trace of the spring from the center of the rolling pulleys.

The vibrations of the pencil usually so inseparable from autographic power registers is overcome by using a flexible brass wire for a tracer. The point of the wire is pressed upon chemical paper with a friction sufficient to cause the vibrations to expend the provided that the point of the wire with the point of the pencil usually so inseparable from autographic power registers is overcome by using a flexible brass wire for a tracer. The point of the wire is pressed upon chemical paper with a friction sufficient to cause the vibrations to expend the provided that the point of the sufficient to cause the vibrations to expend the provided that the point of the pencil usually so inseparable from autographic trace of a pencil upon a paper-covered drum, thus securing an accurate and permanent record of all variations of power during in-tervals of not less than an hour at high belt speeds. Each minute of time is also recorded by electrical attachments belonging to the

The accompanying cut shows the manner of mounting the instrument, the only supports needed being pieces of 11/2-inch steam pipe. The apparatus consists of two rolling pulleys A A, that swing upon pivots C C, which are supported in castings D D. The latter slide upon the rod E, so that by means of the chain F and winding-drum G the pulleys A A may be drawn together, deflecting the belt and forming the angles φ and β . These angles being made equal in adjusting the instrument, the tension of the belt, when the latter is at rest, is the same on either side and causes equal pressure on each of the rolling pulleys, tending to force them apart, but being prevented from so doing by the

When motion occurs in the direction of

and the spring at its furthest position on the

This extraordinary range of capacity is Dey street, New York, have placed upon the market a new portable dynamometer, the design of Mr. George Wale, of Jersey City, N. J. This apparatus offers to the expert a reliable means of measuring power transport of the spring that the movement of the spring effects the pencil scale as the square of the distance of the spring from the center of the problem of the spring from the center of the problem of the spring from the center of the problem of the spring from the center of the problem of the spring from the center of the problem of the spring from the center of the problem of the spring from the center of the problem of the spring from the center of the problem of the spring from the center of the spring from the

> themselves in the flexure of the wire without displacing the point, while any permanent displacement of the wire is immediately responded to by a movement of the point of the tracer. A rigorous test of this instrument was recently made at Stevens Institute, Hoboken, N. J., with very good results.

The Distribution of Steam in Cities

In a paper contributed by Mr. W. A. Goodyear, on "Water Gas as Fuel," read at the Boston meeting (February, 1883,) of the American Institute of Mining Engineers, the following statement was made: "The latest experiments on a scale of some magnitude in our cities in the way of heating tude in our cities, in the way of heating buildings and furnishing power for manu-facturing purposes, have been by the distri-bution of high-pressure steam through pipes laid in the streets. But these exercises the laid in the streets. But these experim (1) have not hitherto been very successful and when we consider the high cost and (2) arrow No. 1, any transmission of power causes and when we consider the high cost and (2) an increase of tension along the upper side of the belt, as designated in the cut, and a decrease of tension along the lower side, or the berk, as designated in the cut, and a decrease of tension along the lower side, the difference of tension thus caused between the sides of the belt forcing the rolling pullys and the rol o to swing about the pivots or c in the direction of arrow No. 2. The latter action causes the arm H to move out of parallelism with the arm I, to which is fastened the bracket N, and thus the spring Lister action causes the arm H to move out of parallelism with the arm I, to which is fastened the bracket N, and thus the spring Lister action causes the arm H to move out of parallelism with the arm I, to which is fastened the bracket N, and thus the spring Lister action causes the arm H to move out of the pipes themselves, (4) it is evident that all such methods must eventually disappear before a system which can furnish cheap gas of great heating power, easily distributed wherever wanted, without the pipes the constant of the pipes, to say nothing of the pipes the constant of the pipes, to say nothing of the pipes the constant of the pipes, to say nothing of the pipes the constant of the pipes, to say nothing of the pipes the constant of the pipes the pipes the pipes the constant of the pipes the constant of the pipes the pipes the constant of the pipes the constant of the pipes the p expanded until its resistance counteracts the pressure on A A, due to the difference of pounds per square inch, and (5) without belt tension. The movement of N causes the pencil X to move outward upon the paper streets through which it passes hot, gratis, drum J; the latter is given a continuous for a distance of 10 or 15 feet in all direc-

WALE'S PORTABLE DYNAMOMETER

primary wheel in goaring represents 200 feet of belt travel. 2. By measuring the length of diagram. The differential gearing is arranged to cause 122,500 revolutions of the rolling pulleys per one turn of paper drum, and the circumference of the latter is 121 inches.

pounds, while a carefully conducted series of experiments upon the loss by condensation places it in a mile of pipe at 5 per cent. of \$50,000, have earned net 12 to 15 per cent. per annum, since the second year. The steam is sold by meter, and readings are taken weekly.

In Dubuque, Iowa, the system has been in operation for five winters, with 2½ miles of mains.

improper construction. Where mineral wool is used freely as an insulating covering to the pipes, excessive radiation of heat does

put in operation in February, 1881, and was run until July, 1883. This plant had a high-pressure main in which 70 pounds pressure was carried, and a low-pressure main carrying 20 pounds, the former being used for power and the latter for heating. I personnot occur.

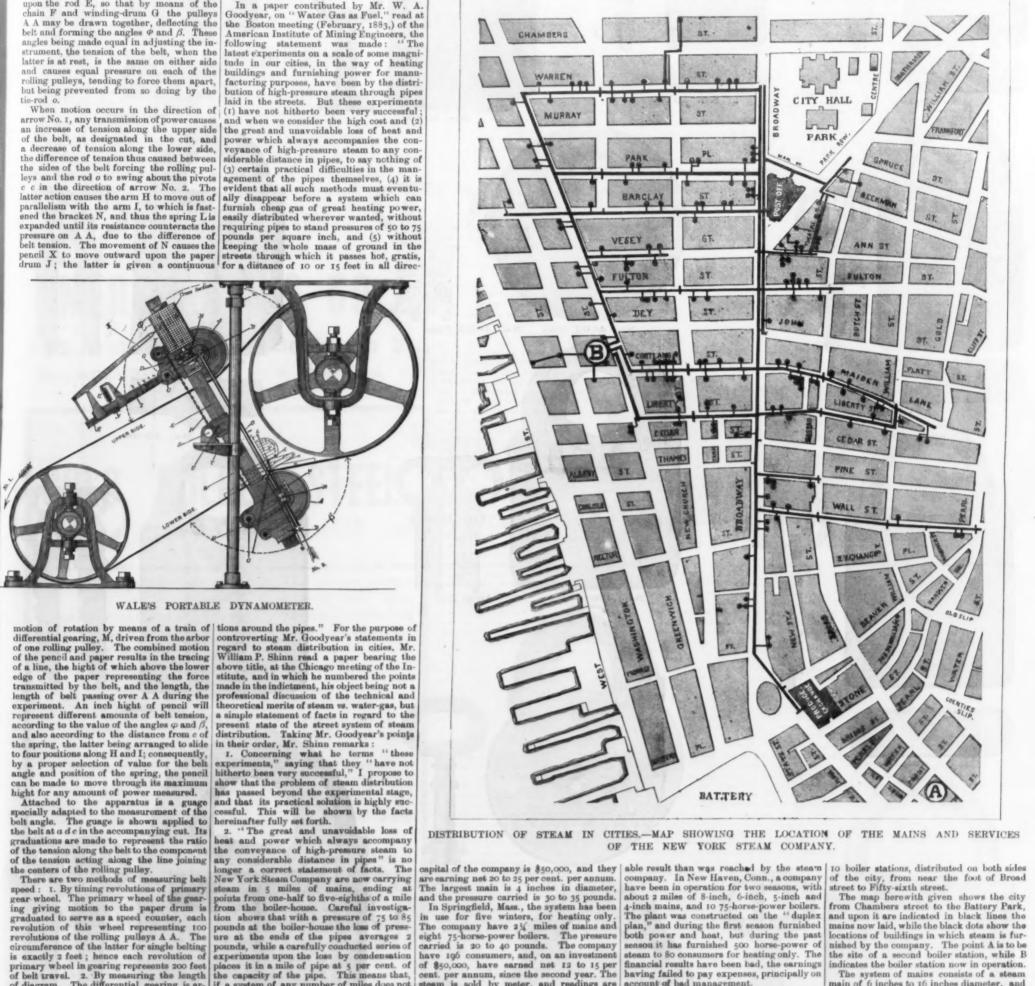
The system of steam distribution invented by Birdsill Holly, M. E., has been in successful operation in Lockport, N. Y., for heating only, for seven years. The company have 4½ miles of mains, six 75-horse-power boilers, and supply over 200 consumers. During the first four years it was operated without meters at a loss. When meters were adopted three boilers were sufficient to supply the customers who formerly required the steam from six. The meters were adopted three boilers were sufficient to supply the customers who formerly required the steam from six. The company, to be used for the distribution of public place" in the City of New York, which water-gas. It has been so used during the contains over 250 miles of paved streets, heating season just ending, with a less favor- and the company now own the property for

which are laid from 5 to 9 feet below the surface, do not radiate heat fast enough to melt the snow in ordinary winter weather any sooner over their location than it is melted elsewhere in the street by atmospheric influences alone. It is no answer to this to say that the street steam-pipes laid elsewhere or by others do melt the snow.

That only indicates carelessness, cheap or improper construction. Where mineral wool boilers of 250 horse power each, 16 on each of four floors, the fifth and sixth stories to be in one, to contain Green's economizers,

and storage for 1000 tons of coal.

The total capacity of the station will be



The company have 2½ miles of mains and eight 75-horse-power boilers. The pressure carried is 20 to 40 pounds. The company have 196 consumers, and, on an investment of \$50,000, have earned net 12 to 15 per

plan," and during the first season furnished both power and heat, but during the past season it has furnished 500 horse-power of steam to 80 consumers for heating only. The financial results have been bad, the earnings having failed to pay expenses, principally on second of bad management.

mains now laid, while the black dots snow the locations of buildings in which steam is furnished by the company. The point A is to be the site of a second belief station now in operation. The system of mains consists of a steam main of 6 inches to 16 inches diameter, and

count of bad management.

In Troy, N. Y., and Detroit, Mich., steam return water-main of 2½ to 8 inches diameter, and plants have been in operation from three to four years, but I have no definite informand surrounded by 6 inches to 12 inches of tion as to their results. and the circumforence of the latter is 125 inches; consequently, each inch of longth of a diagram parallel to base line represents 20,000 feet of belt travel.

The electric time attachment consists of a telegraph sounder carrying a pencil which bears against the paper, and which is caused to mark a stroke once a minute by the passage through a more cury cup of the hand of a minute clock, placed in a battery circuit leading to the electric sounder. The scaled in a battery circuit leading to the electric sounder. The scaled in a battery circuit leading to the electric sounder. The scale of pencil motion may represent 0.094 horse-power (nearly) with very flat belt forces of the New York Steam Company, sinches pencil motion could control 23½ horse-power (nearly) with very flat belt forces on the consequently, each inch of longth in the consequence of the planet of the pipes of the New York Steam Company, and seven 50-horse-power boilers. The company are supplying 25 horse-power boilers. The company are supplying 25 horse-power beating purpose to refer to their expansion and constructed and operated during two winters, black that all such methods to 12 inches of smains, and seven 50-horse-power boilers. The company are supplying 25 horse-power beating purpose to refer to their expansion and constructed and operated during two winters, the former haid between brick walls of mains and seven 50-horse-power boilers. The company are supplying 25 horse-power beating purpose to refer to their expansion and ontropic transportation during two winters, the consumers of heating purposes only. The plant was constructed and operated during two winters, the former haid operated during two winters, the suppose of 2 inches of stanto 140 consumers are all delighted with the service. The New York Steam Company, and has not been in operation during two winters, and the not been in operation during two winters, and the not been in operation during two winters, and the note of the hand on the part of the hand of a minute clock, placed i

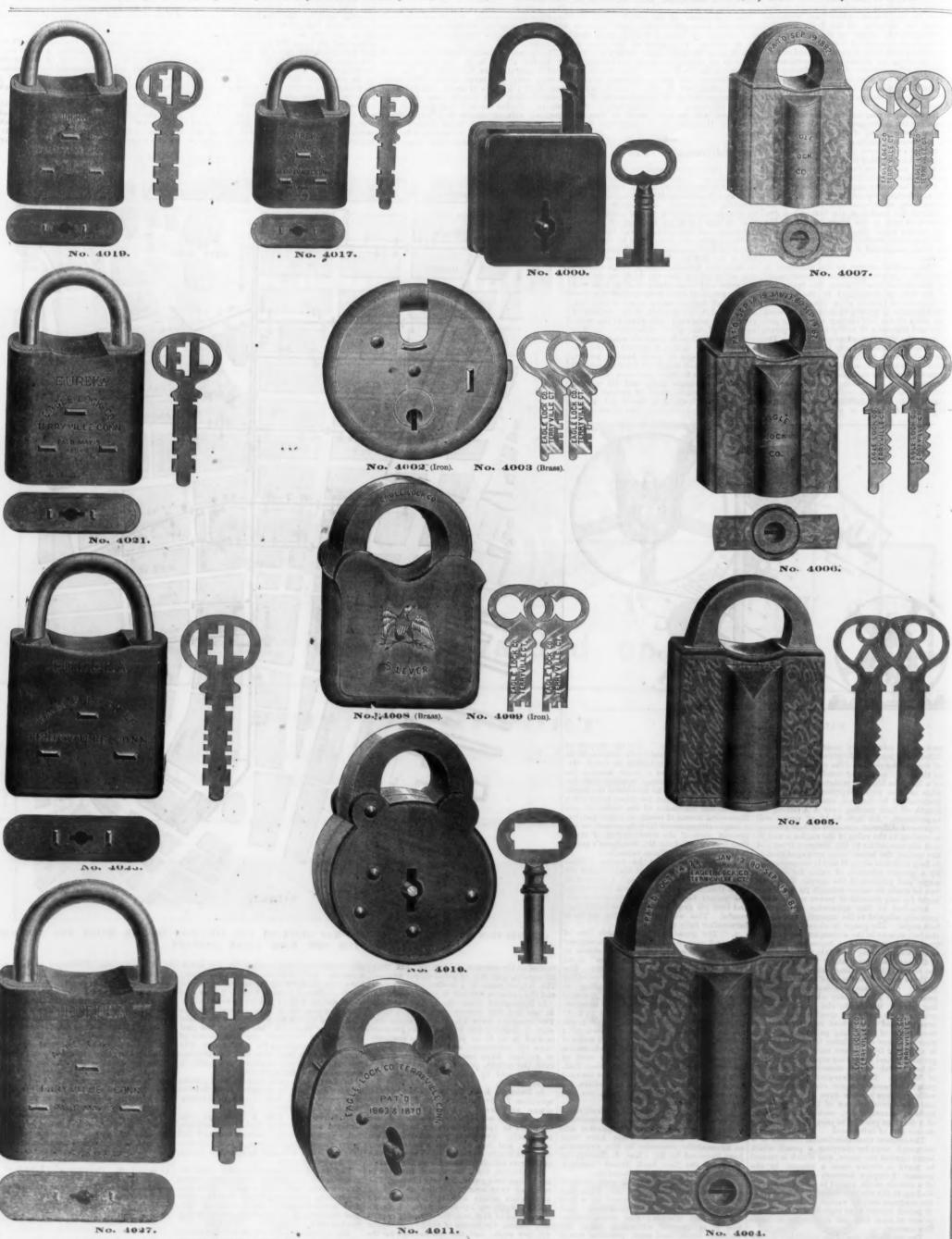
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UARANTEED to contain 19 pounds of Metal on the IC 14 x 20 and 38 pounds on the IC 20 x 28. This Plate we believe to be equal in all pects to M. F. Roofing, and, if not found so, it can be held subject to order. This certainly is all the guarantee required as to our belief in more than the state of the s GUARANTEED to contain 19 pounds of Metal on the IC 14 x 20 and respects to M. F. Roofing, and, if not found so, it can be held subject to our order. This certainly is all the guarantee required as to our belief in its merits. One of the most reliable houses writes us it is "equal to M. F. in all respects." We leave it to other customers to judge for themselves, and solicit correspondence as to prices, &c. We do not detract from the value of the M. F. when we state that the '. Gilbertson's Old Method " is as good and will be sold by us at a much lower price.

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BRIGHT CHARCOAL TIN PLATE.

We have just received 10 x 14, 12 x 12, 14 x 20, 20 x 28, from IC to IXXXX, of the above brand. The Makers have supplied us with the finest Plate they could make, having had no limit made by us as to price. The Plates present a handsome appearance, and are heavily coated, and in our opinion, no finer Plate can be made by any Maker. Prices will be made as low as possible on application. Try a sample box, and, if not not satisfactory, same can be held subject to our order.

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The Gautier Steel Department of Cambria Iron Co., Johnstown, Pa., has the only steel mill in America properly equipped with special machinery for making Cold Rolled Steel. It is guaranteed, when necessary, not to vary more than one one-thousandth of an inch from true round, and is all hand-straightened and perfectly free from kinks or bends. Superior to Cold Rolled Iron in every respect, as the following comparative tests show:

| Material. | Elastic limit. Lbs, per square inch. | Ultimate strength. Lbs. per square inch |
|--------------------|---------------------------------------|---|
| Cold Rolled Iron. | 49,660 | 69,010 |
| 66 66 66 | 49,610 | 67,140 |
| Cold Rolled Steel. | 76,950 | 111,500 |
| 66 A6 | 79,210 | 110,890 |

From the above it will be seen that the elastic limit of Gautier Cold Rolled Steel is greater than the ultimate strength of Cold Rolled Iron, while the ultimate strength of Cold Rolled Steel is nearly 62 per cent, above that of Iron. All Sizes of rounds, from 1 to 3 inches, of standard lengths kept constantly in stock for prompt shipment, cut to any lengths desired. The surface is bright, and sizes are so accurate that no lathe work is necessary. Samples furnished upon application.

GAUTIER STEEL DEPT.

CAMBRIA IRON Co.,

Johnstown, Pa.

NEW YORK OFFICE: 104 Reade St.

[No. 8o.]

Export. Trade a Specialty.

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The New York World. The Iron Age.
United Bank Building.
Smith & McNell, restaurant.

All of these, excepting the two first named, formerly had their own boilers, and now take their entire steam supply from this

Engines are being run of from 1 to 150 horse-power, and the supply of steam is reg-ular, constant and satisfactory.

The amount of capital actually invested in the Station B and its street system is \$1,086,-320,79, of which only one-half the capacity is at present being utilized; but the operations are now on a paying basis, the net earnings being at the rate of \$20,000 per annum, or about 2 per cent. of the cost, and this in the second war of operation. When this in the second year of operation. When Station B is operated at its full capacity. much greater economy will be realized, and its net earnings are expected to be 15 to 20 per cent. on the amount of the investment in that part of the company's system.

The Hotchkiss Mechanical Boiler Cleaner.

A short time since we submitted to our readers an illustration and description of high position. Beginning his business life what was claimed to be a new water purifier as a boy mule-driver in the mines of Pennand boiler cleaner, brought out by Mr. E. W.

van Duzen, of Cincinnati, Ohio.

sp ction, however, will show that
it embodies all the essential features of the Hotchkiss mechanical boiler cleaner, which has been in successful practical operation for a number of years past, the only difference, if we may con-sider it as such, being in the sediment collector, which, instead of having a spherical form, as that used by Mr. Hotchkiss, is that used by Mr. Hotchkiss, is cylindrical, and contains a number of perforated partitions so arranged as to compet the circulating water to pass over a large settling surface. The principles involved in both appliances are exactly alike, being the circulation of the water in the boiler through a system of pipes and a mud collector, the latter being furnished with a suitable blowfurnished with a suitable blow off pipe, and under these circum stances it is questionable whether Mr. Van Duzen's apparatus is justly entitled to the privilege of being considered new or in any way different from that which is now so well and favorably known In order to present the matter more clearly to our read-

ers, we append herewith an engraving showing Mr. Hotchkiss's apparatus applied E. The funnel C is set in the boiler on the low-water line, as shown, and is made of the best charcoal iron. The mouth or opening measures about 12 x 15 inches, and will define a seal of the best charcoal iron. fit into an ordinary manhole, or, should the hele be too small, the funnel may be bent so as to enter and afterward be brought back as to enter and atterward be brought back to its original shape. The reservoir B is a cast-iron spherical vessel with a capacity of about 18 gallons. It is $\hat{\gamma}_{0}$ inch thick and weighs about 215 pounds. When in position, with the pipes attached, it occupies a space with the pipes attached, it occupies a space of from 28 to 30 inches in length, 24 inches wide and 26 inches high, and being a solid casting, without joints and spherical in shape, it is capable of standing an immense pressure. Each one is tested with steam to 150 pounds per square inch before being sent out. The funnel being in proper position the hot water at the surface will enter it and form into the recovery discovered the sentential. flow into the reservoir, displacing constantly an equal quantity of the cooler water therein, which, flowing back to the boiler by the return-pipe, reaches a fower and cooler strata of water than that entering the funnel. Thus a steady and constant circulation of water through the cleaner is maintained so long as firing is kept up. This circulation is continuous and automatic, and by its cer-tain and natural action all the water in the boiler passes successively through the reservoir, where, being kept still and free from agitating currents in the boiler, the most favorable conditions are insured for the precipitation and deposit of sediment. The

pipes, exclusive of service-pipes. The most distant point to which steam is now delivered is 3350 feet from the boiler station, and the other extremities are 3187, 3133, 3044, 2973, 2920, 2880, 2625, 2261 and 2077 feet respectively from the boiler station. The pressure carried is 75 to 85 pounds at the boiler station, and carefully conducted tests show the pressure at the extreme points to be from 1½ to 2 pounds less than at the boiler station. water before they have had time to adhere to the heating surfaces. By preventing the formation of new scale the old deposits, by expansion and contraction of the heating surfaces, soon become loose and readily

The Hotchkiss cleaner was first brought out in 1875, and since that time its merits have become extensively recognized, so that now a very large number are in use throughout the country.

OBITUARY.

Thomas Dickson, president of the Delaware and Hudson Canal Company, and prominently connected with the coal and iron interests of the country, died at his summer home in Morristown, N. J., on the 31st ult. Although he had been sick at times with a complication of diseases for several months past, his last attack had confined him to his home for less than a week.

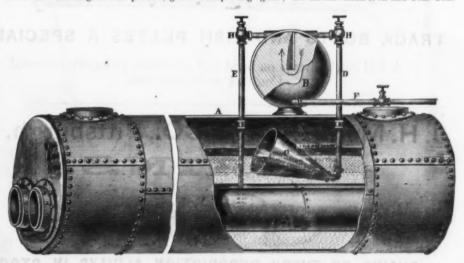
illustration of the opportunities offered in America for an advance from the humblest conditions of life to wealth, influence and sylvania, he ended it as president of one of the largest coal producing and transporting gina; the Lackawanna Iron and Coal Com-

and John, Joseph A. Scranton, B. G. Clarke, J. J. Albright and Joseph Benjamin. The company originally contented itself with the manufacture of stationary engines and machinery intended for use in the mines around Scranton, but its prosperity increased under Scranton, but its prosperity increased under its founder's progressive management, and to-day it has a capital of \$1,500,000 and employs about 800 men. Mr. Dickson was president and manager of the company up to January 1, 1860, when he was succeeded by his brother, George L., his son in-law, Henry M. Bois, now being the president. It was with the Delaware and Hudson Canal Company between the Theorem 1, and the company however. pany, however, that Thomas Dickson secured the bulk of his fortune, and it was under his management that the company took the high rank it now holds among the anthracite coal companies of the East. Not until after he companies of the East. Not until after he had become its president did it acquire its present railroad system. Mr. Dickson entered the employ of the Canal Company in 1860 as superintendent of the coal department, and four years later he was promoted to be general superintendent of all its busi-ness. In 1867 he was chosen vice-president and in 1869 he was elected president. When he was general superintendent the corpora-

tion was of far less magnitude than it is now. Its only railroad was a gravity road from Carbondale to Olyphant, near Scranton, to-gether with a branch to Scranton, the total mileage being only 63. Its roads simply fur-nished connection between the mines and the canal by which the coal product was carried was only about 500,000 tons, and passengers were carried from Carbondale to Scranton by stage. At the present time the company produces from 4,000,000 to 5,000,000 tons a ear and owns or leases 149 miles of road in Pennsylvania and about 600 miles in New

Mr. Dickson held large interests in important iron-mining properties. He was the first capitalist to recognize the importance of the Within the last two weeks he attended to business in this city.

The career of Thomas Dickson is a notable he was a director of and heavily interne was a director of and heavily interested in the Crown Point Iron Company, organized in 1872; the Chateaugay Ore and Iron Company, incorporated in 1875, and the Hudson River Ore and Iron Company, organized in 1881. Mr. Dickson was also inter-



THE HOTCHKISS MECHANICAL BOILER CLEANER.

companies in the country. He sprang from pany, of Pennsylvania; the Oxford Iron and the sturdy Presbyterian stock which has been the bone and sinew of Scotland. His was director), and the Grand Tower Mining, showing Mr. Hotokkiss's apparatus applied to a boiler, from which a good idea may be obtained of its arrangement and method of working. It is a well-known fact that some of a some as the water in a steam boiler becomes heated, currents are established. These currents are formed by the hotter, and therefore lighter, water flowing upward and away from the source of the greatest sea, while the colder, and consequently more dense, water flows to the source of heat to replace the other, and in its turn be come heated. In all boilers, when heat is applied at one end, the currents established will be upward and from the fire on the surface and downward and toward the fire in the lower part of the boiler. Mr. Hotchkiss has made use of this in his cleaner, which, as shown in the illustration, consists essentially of a large spherical reservoir, B, connecting with his schoolmaster (the company, a position here back into the boiler through the pipe D, then into the reservoir and from the fire on the such as hown in the illustration, consists essentially the return-pipe E. Circulation thus take place from and through the funnel C, up the pipe D, then into the reservoir and from there back into the boiler on the such as a shown, and is made as a fire that Thomas received his schooling, by the funnel C is set in the boiler on the low-water line, as shown and is made of the seturdy Presbyterian stock which has been the bone and sinew of Scotland. His been the bone and sinew of Scotland. His father, James Dickson, was the son of a different who served for 20 pears in the 92 colland. His father, James Dickson, was the sun of a solice who served for 20 pears in the 92 colland. His father, James Dickson, was a malter millwright. The first of his six children, Thomas Dickson was a ment of the sex vice of his in his cleaner, which, as shown and toward the fire in the low-water of the boiler by the return-pipe E. Circulation thus takes place from and through the funnel C, up the pipe D, then into the boiler of the boiler of the boil with his schoolmaster (the only one in the neighborhood), he decided to earn his own living. George A. Whiting then had charge of the horses and mules of the company used in connection with the coal-mining operations, and he hired young Dickson as one of the boys who rode the mules. Years afterward Mr. Dickson was wont to tell with gusto that he was the first boy who ever went on strike in the coal regions. His training, he cultivated a literary tasts. In gusto that he was the first boy who ever went on strike in the coal regions. His wages then were 10 cents a day and he demanded 12 cents, a sum which was granted after only a day's idleuess. In 1838 Thomas entered the country store of Charles T. Pierson, at Carbondale, as clerk. The next year Pierson sold out to Joseph Benjamin, young Dickson being transferred with the stock. In 1843 he was again transferred with the store and business to F. B. Grow and Edwin Grow, brothers of Galusha A. Grow. While store and business to F. B. Grow and Edwin Grow, brothers of Galusha A. Grow. While clerk for Joseph Benjamin young Dickson had won the favor of his employer by his energy, faithfulness and honorable character. The two went into partnership in 1845 in the country store business, and in 1852 Thomas Dickson was able to purchase an interest in the foundry and machine shops which Mr. Benjamin was running in addition to his store. This business is now conducted by J. B. Van Bergen & Co., and Mr. Dickson, when he died, still had a small interest in the form.

In 1856 Mr. Dickson entered upon his first agitating currents in the boiler, the most favorable conditions are insured for the precipitation and deposit of sediment. The latter, once deposited in the reservoir, latter, once deposited in the reservoir, is removed through the blow-off pipe F as often as necessary. Every one familiar were his father and two brothers, George L.

In 1850 Mr. Dickson entered upon its tree agreement to the took the initiative. He went to Scranton, Pa., and with the aid of his experience, acquaintance and capital established the Dickson Manufacturing Company. Associated with him were his father and two brothers, George L.

president of the Dickson Company, and Joseph B., partner in the coal firm of A. S. Swords & Co., of this city.

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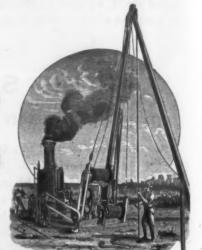
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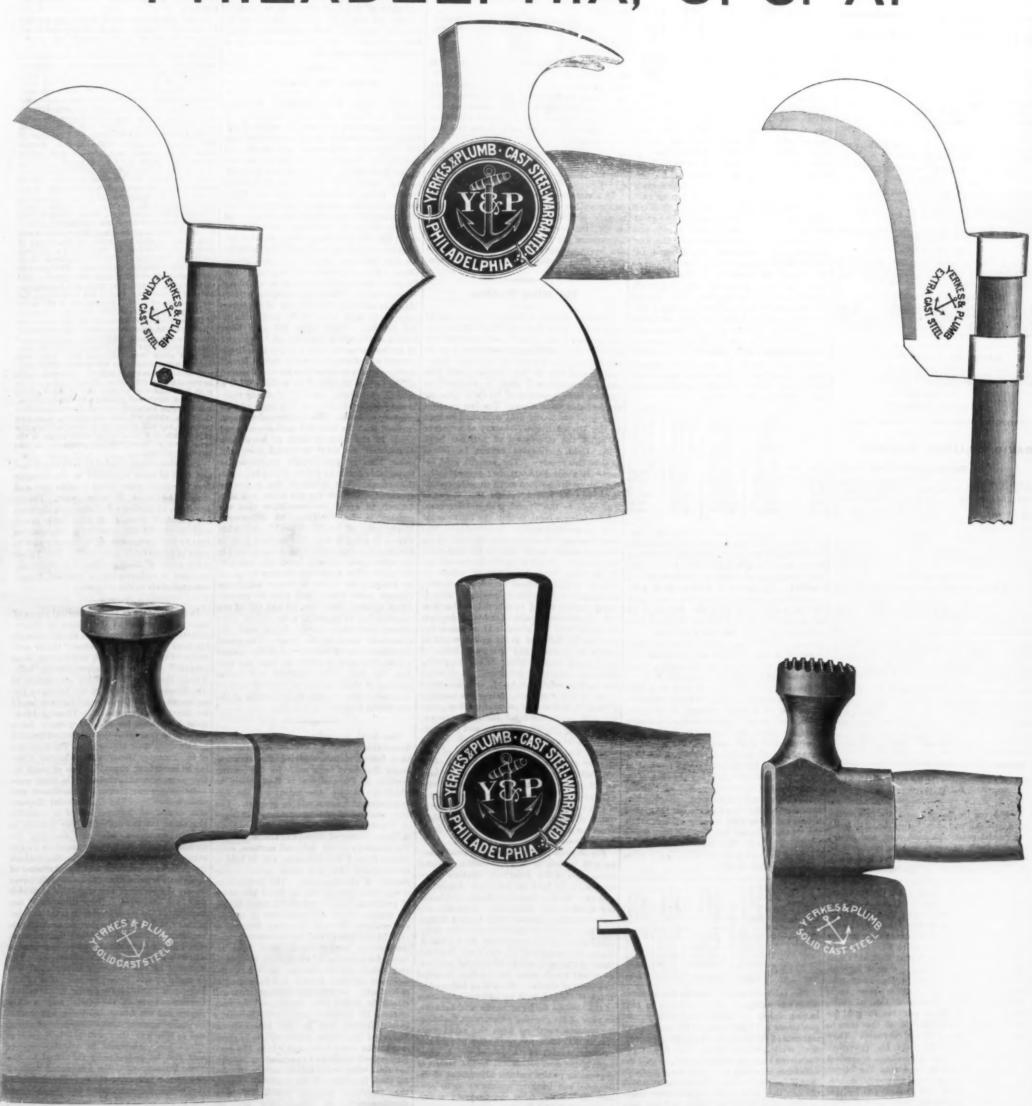
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Metallurgical Review.

New York, Thursday, August 7, 1884.

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" And the Road will be Laid with Steel

"It is our intention," says the prospectus of a new railroad, now before us, "to build a model road. Elegant cars and equip-"ments will be used, and the road will be "laid with steel rails." Time was when this announcement of the intention to use steel rails would have been very significant. It is only about 21 years since the first steel rail was laid in the tracks of an American railroad. Steel rails were then in use in Great Britain-to a very limited extent, however-but so enthusiastic in their prais were the railroad managers who had tried them that the Pennsylvania Railroad Com pany were induced to order a small lot with which to make experiments. They purchased 100 tons of English steel rails, through Philip S. Justice & Co., of Philadelphia, paying \$150 per ton in gold for them, which was equivalent at that time to over \$300 in United States currency. They were made of crucible steel, and proved to contain such a large percentage of carbon that many of them broke during the following winter, which was unusually severe. company were not discouraged by this unfortunate experience, but gave further orders for 500 and 1000 ton lots, which were presumably made of softer metal. In 1864 Messrs. Justice & Co. sold imported steel rails at \$162.50 per ton gold, or about \$250 per ton currency, but later in the year they were able to supply them at \$135 gold. The Bessemer process of steel production was then in its infancy in Great Britain, and had not been successfully established in this country On May 24. 1865, the first Bessemer steel rail ever made in the United States was rolled the North Chicago Rolling Mill Company. In August, 1867, the Cambria Iron Company began to roll Bessemer steel rails in the way Bessemer steel-rail manufacture assumed in | rails.

the United States the position of an established branch of the iron and steel trades. At that time, however, the future of the steel-rail trade was not thoroughly assured, as iron rails could be obtained at very much lower prices than steel rails, and the number of steel-rail mills was very small as compared with the iron-rail mills. The following table will show the relative position of the two branches of the domestic rail trade for the first four years after our Bessemer steel works got fairly into operation, the figures being taken from the reports of the American Iron and Steel Association:

| Years. | Iron rails | Steel rails | Price of | Price of |
|----------------------|--|-----------------------------------|------------------------------------|---|
| | produced. | produced. | iron rails. | steel rails. |
| | Net tons. | Net tons. | Currency. | Currency. |
| 1867 1868 1869 | 459,558 499,489 588,996 586,000 | 2,550 7,225 9,650 84,000 | \$88.12 78.87 77.25 72.25 | \$166.00 158.50 -182.85 106.75 |

process presented many difficulties which required the expenditure of much time in experiments. Gradually, however, all obstacles were overcome, workmen became more expert in the discharge of their several duties, steel rails grew in favor among railroad managers, and our works turned out larger quantities of rails yearly. The great extension of our railroad system in 1870 and 1873 assisted the development of the new industry very materially, the demand for far beyond the capacity of the domestic works that large quantities were imported 149,786 net tons arriving here from abroad in 1872, and 159,571 tons in 1873. Importations rapidly diminished after the latter year, until in 1876 not a single foreign steel rail came to this country, though a revival of importations took place in 1879, which lasted until the beginning of the present year. The following table shows the relative tion of gold coin in the Treasury, and that condition of the two branches of the domestic rail trade from 1871 to 1877 :

| Year. | Iron rails produced. Net tons. | Steel rails produced. Net tons. | Price of iron rails. Currency. | Price of steel rails. Currency. |
|-------|--------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|
| 1871 | 787,488 905,980 | 38,250 94,070 | \$70.87 85.12 | \$102.50 112.00 |
| 1873 | 761,062 | 129,015 | 76.67 | 120,50 |
| 1874 | 584,469 | 144,944 | 58.75 | 94.25 |
| 1875 | 501,649 | 290 868 | 47.75 | 68.75 |
| 1876 | 467,168 | 412,461 | 41.25 | 59.25 |
| 1877 | 832,540 | 482,169 | 85,25 | 45.50 |

In 1877 the production of steel rails over took that of iron rails, the former having made steady yearly progress, while the latter even more rapidly retrograded from 1872, when the maximum of iron-rail production was reached. The prices of both kinds of rails receded very rapidly toward the latter part of this period. In 1873 the difference in prices was \$43.83 per ton in favor of iron rails, but in 1877 the difference was only \$10.25. In all these years it was no mean boast of a new railroad company that its equipment would be of a good quality, "and the road will be laid with steel rails."

From 1878 to the present time iron rails have been steadily falling in favor, with the exception of a brief interval in 1879-81, when the "boom" gave this dying industry a respite from its inevitable doom. The production of steel rails, on the contrary, advanced with prodigious strides from year to year until the maximum was reached in 1882, since which time the depression in trade that has so seriously affected railroad traffic has caused a falling off. During this period prices fell to a lower point than ever before known in this country, though while the "boom" lasted they touched high-water mark. The following table shows the condition of the two divisions of the trade from 1878 to the close of 1883:

| Years. | Iron rails produced. Net tons. | Steel rails produced. Net tons. | Price of iron rails. | Price of steel rails. Currency. |
|--------------------------------------|---|---|--|---|
| 1878 1879 1880 1981 1882 | 322,890 420,160 493,762 488,581 227,874 | 559,795 698,118 968,075 1,355,519 1,460,920 | \$83.75 41.25 49.25 47.12 45.50 Not | \$42,25 48,25 67,50 61,13 48,50 |
| ppe | BA OKA | 1 008 740 | amatad | 00' 70' |

This table shows how greatly the iron-rail trade has collapsed, the production in 1883 having fallen to insignificant figures, and notations not being made in the leading rail markets of the country. It will be observed, that, while steel-rail prices were \$18.25 per ton above iron-rail prices in 1880, in 1882 the difference was only \$3. It is very probable that if we could obtain the prices at which the few iron rails were sold that were made in 1883, they would be found to have been above the steel-rail prices given for that year, as other iron products have not fallen proportionately with steel rails.

We noted in our market report last week that steel rails are now selling at \$28 per ton at Eastern works. It is safe to assume that at the present cost of materials iron rails could not be made at that figure. In show. It is stated that the promoters of the any former period of depression they were exhibition have issued a pamphlet containing not made at such a low rate. Iron-rail mills a forecast of the programme, which promises are, therefore, absolutely a thing of the "many novel and unique features." There past, except, perhaps, for the manufacture of mine rails. Without taking the fact of the tion to white workmen of many crafts, there lower wearing qualities of iron-rails into will be live Indians, Chinese and negroes of regular business. Other companies soon consideration, it does seem very probable plying the vocations to which they are accuss concerning these rates, as well as the names an exaggeration of the treasures behind followed in their wake, and from 1870 the indeed that "the road will be laid with steel tomed in America. There will be an exhibi-

Condition of the Blast Furnaces.

On the opposite page will be found our monthly statement of the condition of the anthracite and bituminous furnaces of the country. From this statement it appears that on August I there was a still smaller number of furnaces in blast in the United States than on July 1, the number having been diminished by the blowing out of 16 furnaces since the publication of our last report, of which to were bituminous and 6 were anthracite. The following table shows the condition of the anthracite furnaces on the ist of August, as compared with their condition on the 1st of each of the two previous months:

Furnaces Weekly Out of Weekly in blast. capacity. blast. capacity. 106 27,972 124 27,805 101 25,949 180 28,765 195 26,144 138 29,525 June 1.... July 1..... August 1...

From this statement it will be seen that the restriction of the production of anthra cite pig iron continued in July at almost the same rate as in June. The following table shows the condition of the bituminous furnaces on August I, as compared with their condition on the 1st of each of the two pre

Furnaces Weekly Out of Weekly in blast, capacity. blast, capacity. 98 42,903 127 42,901 1.98 47,809 127 44,211 1.88 43,877 138 49,944 June 1...... July 1...... August 1....

This statement shows a heavy restrictive movement in July, against an almost sta tionary condition of affairs in June. Evidently, the low prices recently touched for bituminous pig iron in the West and South are having their effect on producers, who steel rails during that period having been so shrink from continuing the ruinous compe-

The Silver Problem.

Treasury officials intimate, through verbal xpression, what their published statements had prepared the public to believe-that the issue of gold certificates must ere long be discontinued, on account of the rapid deple the Government will deem it nece pay at least a portion of its daily Clearing House balances in silver. The law requires that \$100,000,000 of gold coin shall be kept in the United States Treasury as a reserv to offset the circulation of national bank bills. Gold certificates cannot be issued against this reserve. The present gold reserve is about \$118,000,000; consequently, only about \$18,000,000 more in gold certificates can be issued, unless the store of gold coin in the Treasury should increase. Silver being a legal tender, the banks could raise no question against its acceptance, and would necessarily adjust their business to the changed condition of things in the best manner possible. Aside from the inconvenience of handling large quantities of silver, or even of handling silver certificates merely, the monetary disturbance inevitably attending a change would be seriously embarrassing. The intrinsic value of the dollar depends on the price of bar silver. At 48 pence the legal-tender dollar of 4121/2 grains would be worth 81.37 cents, and the trade dollar of 420 grains would bring 82.86, supposing both to be in perfect condition. At 50 pence the former would be 84.77, and the latter 86.31, in like condition. Silver has recently advanced, and at the current market price, say 50% pence, the legal dollar, if unworn, would bring \$6,000 (86.04 cents), and the trade dollar 87.60 cents, if sold for their weight alone. To compel the acceptance of the inferior metal on a parity with gold could not fail to produce evil effects, so long as Congress permits an interference with natural laws, but bankers are in expectation of large returns of gold from Europe in the course of the next few months, which might avert for a time the consequences of a drain on the Treasury.

For obvious reasons more than usual inter est will be felt in the approaching annual convention of the American Bankers' Association, to be held at Saratoga, August 13 and 14. No less than 7855 banks and bankentire banking capital of the United States, are expected to be represented. The inau gural address of the president, Mr. Lyman J. Gage, vice-president of the First National Bank of Chicago, will be of especial interest, as it will touch upon the leading financial questions of the day. He will be followed by Hugh McCulloch with an address upon some of the obvious duties of banks and bankers in view of the growing pressure on the banking system, resulting from the rapid progress of the commerce, productive powers and material wealth of the country. A chief topic of the convention will be the means of preventing panics and the adjustment of the financial and banking system so as to protect the country from the frequent occurrence of financial disaster.

If we may be allowed to base an opinion on information sent from London by cable proposed American Exhibition in the English metropolis is destined to be a sort of variety

include a broker's office in Wall street, a Philadelphia. camp fire in Nevada, a San Francisco wine shop, a Florida fruit store, Indian canoemakers, a receiving and dispatching office for cable dispatches, and reproductions of elevated and electrical railways. Such a will only add that a "characteristic" Amercan show of this kind would be as great a novelty on this side of the Atlantic as in

Eastern War Rumors.

China spurns the conditions of peace ciliatory measures. The correspondent says, further, that the best and most experienced heads in the country seem to have been deliberately set aside or passed over, and either men of anti-foreign tendencies or respectable dummies put as chief advisers to the crown. The situation has a graver appearance than it has yet worn, and it is difficult to avoid the conviction that the country is fast drifting to shipwreck. Everything, of course, depends upon what France is going to do. She has now gone so far that it is impossible to let things revert to the status quo. Equally impossible will it be for her to allow a guerilla warfare to go on in Tonquin for years, a course which the Chinese seem determined now to pursue. There appears, therefore, no way out of the situation but an appeal to arms, unless some sudden convulsion should again send the friends of peace to the front. The actual commencement of hostilities is likely to start a train of events of which no man can predict the end. The complete and entire opening of China to the advance of modern civilization may be one of the results of the impending contest.

The local committee of the American

Association for the Advancement of Science have issued circulars giving the arrange ments that have been made for the coming meeting at Philadelphia in September, at which the British Association for the Advancement of Science will be present. The daily sessions of the associations will begin on Thursday, September 4, at the Academy of Music, corner of Broad and Locust streets. The meetings of the different sections, comprising from A to I inclusive, will be held in Horticultural Hall and other rooms in the vicinity of the Academy. The programme is very complete, giving in detail the order of exercises for the various meetings during they are stationed. Notwithstanding the and continue through Thursday, September 11. In addition to the regular meetings and conferences, arrangements have been effected for a number of excursions, receptions and other entertainments, in which the members and their friends will be invited to participate. Besides the interest that will attach to such a joint meeting of the associations of America and Great Britain, special feature will be the International Electrical Exhibition, which will be in progress at the same time, and which the associations will be invited to attend on Septem ber 10th, when every facility will be afforded for their inspection of the exhibits. Among the American societies which will meet simultaneously at Philadelphia are the American Institute of Mining Engineers, the American Institute of Electrical Engineers, the Pennsylvania State Agricultural Society, the Agassiz Association and the Association to the daily papers, it seems to us that the of Collegiate Alumna. The local committee, as their circulars evidence, have taken great pains to arrange for accommodation for all members and visitors attending the meeting, and for that purpose have secured special rates from the leading hotels; arrange ments have also been made with the railroads by which visitors may come from any part of the continent at reduced rates, one of the circulars issued containing particulars tion of characteristic American amusements agents of the several railroads. Informa-susceptible of development under more

and sports, including theaters, concerts and tion concerning the scientific business of the balls. American dramatic artists will at- meeting, applications for membership and tend, and there will be displays of American presentation of papers can be obtained from painting, sculpture, drawing and engraving.

Mr. F. W. Putnam, permanent secretary,
Many novel phases of American life will be Salem, Mass., up to August 20, after which shown by tableaux and interiors. These will date his address will be Hotel Lafayette,

The Cuban Iron-Ore Enterprise.

Through the courtesy of Juan Tatjer y Riqué, of Santiago de Cuba, we have been varied assortment of attractions ought to favored with an account of the inauguration please our British cousins if they are at all of the new railroad of the Juragua Iron susceptible to the charms of novelty. We Company, translated from the account of that event given in the Cuban papers, as follows: On the 17th of July the railway built by the

England, and could doubtless be reproduced here with profit after running through a successful season abroad.

On the 17th of July the rallway built by the Juragua Iron Company for the transportation of their iron ore to the bay of Santiago was inaugurated. Invitations had been issued by G. B. Linderman and T. H. Graham, president and director respectively of the company, to about 40 persons, among them the Governor of the Province tiago, Luis M. de Pando, and several of the most noted individuals of the city. The press was also well represented. They assembled at 7a. m. on the dock. At about 7.30 the steamer Mercedes left the offered by France, and the alternative is war. This is the purport of our latest advices. We were indulging in the belief that the would-be belligerents had finally arranged their differences, so that the menace of hostilities might cease to disturb the commercial world—the distractions in Eastern traffic being far-reaching—but our latest mail advices are calculated to dispel all hope of an amicable adjustment. A well-informed correspondent in Shanghai writes to the effect that the late Prince Kung and his colcorrespondent in Shanghai writes to the effect that the late Prince Kung and his colleagues, comprising the Grand Council of the Empire, had been deposed, and that Prince Chun, who is the father of the present boy Emperor, is to be chief adviser in all affairs of importance. The other members are two Manchus and four Chinese, one of the latter among the most reactionary mandarins in the Empire. Prince Chun has long been it. After going over the line, which extends 28 km. (1734 miles), a stop was made at the village of Juraguacito, affording an opportunity to go over the line, which extends 28 km. (1734 miles), a stop was made at the village of Juraguacito, affording an opportunity to go over the line, which extends 28 km. (1734 miles), a stop was made at the village of Juraguacito, affording an opportunity to go over the line, which extends 28 km. (1734 miles), a stop was made at the village of Juraguacito, affording an opportunity to go over the line, which extends 28 km. (1734 miles), a stop was made at the village of Juraguacito, affording an opportunity to go over the line, which extends 28 km. (1734 miles), a stop was made at the village of Juraguacito, affording an opportunity to go over the line, which extends 28 km. (1734 miles), a stop was made at the village of Juraguacito, affording an opportunity to go over the line, which extends 28 km. (1734 miles), a stop was made at the village of Juraguacito, affording an opportunity to go over the line, which extends 28 km. (1734 miles), a stop was made at the village of Juraguacito, affording an opportunity to go over the line, which extends 28 km. (1734 miles), a stop was made at the village of Juraguacito, affording an opportunity to go over the line, which extends 28 km. (1734 miles), a stop was made at the village of Juraguacito, affording an opportunity to go over the line, which extends 28 km. (1734 miles), a stop was made at the village of Juraguacito, affording an opportunity to go over the line, which extends 28 km. among the most reactionary mandarins in the Empire. Prince Chun has long been known as the bitter opponent of foreigners. So far he has never been brought into direct contact with foreign agents at Pekin, but all testimony goes to show that he would cancel all the foreign treaties if he could. With a council exclusively made up of strong reactionary materials there is little hope of conciliatory measures. The correspondent says, and admiring the work done by the Juragua Iron Company, which will not only develop their own property, but will at the same time facilitate the exploitation of a good many other mines in the same locality, thereby giving prosperity to that province of Cuba.

The other mines alluded to are located east and west of those controlled by the Juragua Iron Company, some being 6 miles east and others the same distance west. Ferrer Brothers, of Santiago de Cuba, own the most important of them, 18 in all. Their ore is said to possess the same characteristics as that of the Juragua Iron Company, and to exist in remarkable abundance. Mr. Tatjer is the agent of these gentlemen in this country, and is endeavoring to interest American capitalists in the property.

In consequence of the economical views of

ome of the leaders of the House of Representatives, the publication of sundry reports has been discontinued by some of the departments of the Government, not having been provided for in the appropriation bills. Among these are the monthly statements of the Bureau of Statistics of the Treasury Department and the Commercial Reports issued by the State Department. These publications have been issued so regularly for a number of years that the public had learned to rely upon their appearance. The statistics of the Treasury Department, whether relating to imports or export', were at least interesting to most people, while they were valuable to some classes of merchants and manufacturers. The Commercial Reports also contained information of a valuable character, communicated by our consuls in foreign countries, who are specially instructed by the State Department to report regularly on the state of trade, the outlook for American products, and the character of American articles likely to meet with favor among the people of the countries in which the session, which will commence on the 4th inability of the departments to print the reports referred to for the purpose of distributing them, it is understood that the isformation will still be available, but its distribution will be a matter of private enterprise. The statistics of the Treasury Department will be made up and placed in the office of the Bureau of Statistics for public examination. Correspondents of the daily and weekly papers and the Associated Press will doubtess take copies or make abstracts of them. and in this way they will get into general circulation. Abstracts of consular reports will also be undoubtedly furnished by the State Department to the Associated Press or newspaper correspondents. The information which the commercial and manufacturing public needs will thus escape suppressi but the fact is not complimentary to this rich and powerful nation, which is so rich that it can afford to squander millions of dollars on river and harbor improvements of doubtful utility, and yet is so economical that it cannot afford a few thousands to continue projects of approved usefulness.

> Trade with Korea thus far proves to be a disappointment, so that practically the new treaty has little significance. The wealth of the country appears to have been greatly overestimated, its walls of environment seeming to have assisted the imagination in

favoring circumstances. A correspondent in Shanghai predicts that there will be but a very insignificant trade for a good many years, the general poverty of the country being such as to make trade on any extensive scale an impossibility. A customs staff of European officers has been organized after the manner of the Chinese customs service, but it is reported that the duties collected in Shanghai quote the average price since the boom for good pig iron, suitable to make good, fibrous iron; they quote the present low, ruinous price of ordinary gray forge pig, of neutral and cold-short grades. To make tin plates of good, reliable quality, a good stock of iron must be used. Good grades of pig iron are seldom sold in this section, not even at this depressed period in the live is reported that the duties collected. but it is reported that the duties collected are insufficient to pay the salaries. The British Minister to Pekin is now in Korea to exchange the ratifications of the treaty made last year, and it was understood that he would endeavor to obtain several important concessions, the benefits of which the United States would, of course, share, on the basis of equality with "the most favored nation."

The Connellsville Coke Producers' Association, which virtually controls the output of coke in the Connelsville region, has lately been running four days in the week, with 75 per cent. of the ovens in operation. They have decided, however, owing to the greater cost of operating in this method, to run the ovens the whole time, making 48hour coke six days in the week and 72 hour for the Sunday coke, as was formerly the custom, but have concluded to put the fires ciation was formed, and which is far below

It is interesting, in view of the present strike of the bricklayers and laborers in this city for nine hours as a day's labor, that in More's "Utopia," written shortly after the discovery of America, and which pretends to give the laws obtaining in a community that had been discovered on this continent, the hours of labor are given as nine a day. With all deference to the bricklayers, then, it must be understood that Sir Thomas More is the original nine-hour man.

The Practical Aspects of Tin-Plate Manufacture.

To the Editor of The Iron Age—SIR: I have read with much interest Messrs. Trick & Hutchings' letter appearing in your last issue. They seem to have grown intensely earnest over their subject, as I perceive they challenge and even dare me take up the gauntlet they have thrown down to me. I willingly accept the challenge, and, if you can indulge us that far, will discuss this question of tin-plate manufacture in your columns. I do this not for the purpose of controversy, but because I believe a fair, practical discussion will furnish much interesting data to not only tin-plate consumers, esting data to not only tin-plate consumers, but to the business fraternity in general, and, indeed, the workingmen, whom I know to be

readers of The Iron Age.

I am certainly as anxious as Messrs. Trick & Hutchings can be to see the industry of tin-plate manufacture built up in this countin-plate manufacture built up in this country. It is therefore preposterous on their part to assert that I am against America having fair play. I have argued, with perhaps more zeal than they, that we have in this country natural advantages and resources equal, if not superior, to those of any other country for the manufacture of tin plates. Notwithstanding this, the fact remains that no tin plates are manufactured. mains that no tin plates are manufactured here; and why? Is it because Americans are lacking in enterprise, in ability, in skill or in capital, or is it because capitalists are indifferent to the importance of this indus-try? Not at all, for, to put it plainly, it is simply because under the existing tariff of I amply because under the existing tariff of reent per pound the business would be unprofitable, the tariff being too low to cover the difference in the rate of wages paid here and those paid abroad. This is where the "rub" comes in, and is the essential point of argument on which Messrs. Trick & Hutchings and I differ.

I shall now briefly review their lest letter.

I shall now briefly review their last letter. That very large part of it having reference to the Hubbard affair, as that concern has turned out to be a fizzle, I pass by without comment. In their criticisms of the few statistics I gave in my former letter, they seem to have entirely misapprehended their detailed cost of production. I dealt the question of wages to labor only. item "one ton of pig iron" was added to the ton in list for the purpose of covering the difference give for in wages to labor in each country. I had no intention to presume that a ton of sheet bars could be made out of a ton of pig iron, or that a ton of tin plates could be made out of a ton of sheet bars. I adopted the unit of a ton of sheet bars. I adopted the unit of payment of "one ton" because it suggested self to my mind as being easily understood and having a tendency to drive away any doubts as to the truth of my deductions. A careful perusal of my letter will disclose the fact that I did not attempt to give the cost of all labor represented in a ton of tin plates, for in the item of "a ton of sheet bars from pictions". I gave only a cost of the labor. pig iron" I gave only a part of the labor engaged. Messrs. Trick & Hutchings have seen fit to state that my figures are misconceived, and denounce them as "specious statistics," &c. Very well, I will endeavor to be more minute, and I ask them to be as candid in their presentation of figures as I try to be, or, if they desire to continue as

Regarding the price of pig iron given by

iron business, below \$17.50 per ton. They cannot be, as it can be demonstrated that the cost of production at the present time the cost of production at the present time of good, reliable grades of pig iron is fully up to \$17 per ton. Another point that should be observed is that the price of tin plates has not depreciated within the last two years as much as one-fourth the proportion that pig and bar iron have. We can safely infer from this fact that when pig and bar iron advance in price, tin plates will remain almost absolutely at their present prices, unless, of course, a boom in the iron trade should take place, and English makers could safely advance the price of tin plates. There are many reasons why this is so, but it is not necessary to discuss them here. Still, these facts are significant and of vital importance to Messrs. Trick & Hutchings, for with pig iron advancing in price here, and tin plates being kept almost stationary in price, through the competition of English makers, they would, could they succeed in erecting a tin plat works. they would, could they succeed in erecting a tin-plate works, find themselves in a peculiar custom, but have concluded to put the fires out in 5 per cent. more of their ovens. So at the present time but about 70 per cent. So at the present time but about 70 per cent. of the capacity of the ovens belonging to the association is in operation. Coke is now selling at \$1.10, at which price there is little profit, though at some works it barely pays the cost of prduction and handling, but this is regarded as much more satisfactory than to have the production so far in excess of the demand as to be obliged to sell for 90 cents, which was the price before the association was formed, and which is far below ciation was formed, and which is far below time to be carefully considered, and should be the second that has existed among tin-plate makers. tion that has existed among tin-plate makers in England and Wales for many years, which has resulted in low prices, inferior goods and bankruptcy to quite a number. All the weak companies have been annihilated, leaving business at the present in the control of rich, powerful companies. In these premises, it may be interesting to some consumers of tin plates to know that there is much dishonesty plates to know that there is much dishonesty practiced in tin-plate manufacture. Sheets (iron) of very poor quality, that would hardly hold to be doubled up loosely without splitting open, become, when tinned, apparently a fair quality of tin plate, and may be doubled up loosely with impunity, without showing much evidence of splitting. This is the total the total transfer of the section of the total transfer of the section of the sectio due to the tin covering, tin being extremely malleable. Once the tin is removed the fraud will be apparent. The amount of tin malleable. Once the tin is removed the fraud will be apparent. The amount of tin used in coating is very irregular also. To a box of I C coke, 14 x 20, 112 sheets, weighing 108 pounds, 3½ pounds is considered the average, but I am told that as low as 2½ pounds are sometimes used. The same in charcoal plates; 5 pounds are considered the average for good plates, but it is reported that as low as 2½ pounds are considered the average for good plates, but it is reported that as low as 2½ pounds are often considered the average for good plates, put it is reported could be made from 1872 to 1872—the period could be made from 1872 to 1873—the period could be made from 1872 to 1873—the period that as low as 3½ pounds are often considered passable. The brands I X and I X X, &c.,

that as low as 3 ½ pounds are often considered passable. The brands I X and I X X, &c., refer more particularly, as practiced, to heavier sheets of iron, and not that the sheets are coated heavier with tin. This part of our subject will be dealt with more extensively at some future time.

Messrs. Trick & Hutchings seem to have been startled almost out of propriety with my statement that in the manufacture of sheet bars from pig iron the cost of labor inside the mill was \$9.65 in this country, as against \$3.89 in Wales. They have corrected what they assume to be an error, by stating that the cost of all labor in this department to a ton of sheet bars in Wales was, according to their last cost account, \$6.80 per ton. They have evidently overlooked the fact that I gave the cost of but a part of that labor. Would they assume that the comparative figures of \$6.80 and \$9.65 would be anything like the truth as to the comparative cost in each country? If not, why did they not also correct \$9.65 as the cost of all labor in this country? But to prevent any further misconceptions or misconstructions I will itemize my statement, hoping they can see clear to itemize theirs. In this statement I simply follow the direct line of manufacture through puddling and bar mill:

| puddling and bar mill | 1: |
|-----------------------|-------------------|
| Umited States. | Wales. |
| Per ton. | |
| Boiling \$5.50 | Boiling \$1. |
| Muck rolling45 | Muck rolling |
| Catching | Catching |
| Dragout and hook15 | Dragout and hook. |
| Hammering75 | |
| Heating piles73 | Heating piles |
| Rolling | Rolling |
| Catching | Catching |
| Engineer, stock- | Engineer, stock- |
| men, &c 1.18 | men, &c |
| Total 80.65 | Wortel 60 |

Rehammering and reheating in this country is twice repeated. Knobbling, smith, bricklaying, common labor, office-work, &c., are nature. I did not attempt to enter into a much higher here than in Wales, which, if detailed cost of production. I dealt with added to the above would place the excess The in wages paid in this country over \$8 per ton in this department alone. The prices I give for the United States are taken from the Amalgamated Association scale of prices governing mills that manufacture black plates, some process as sheets for tinning. The prices I give for Wales are taken from a number of lists, striking the average, but I believe that wages in Wales are somewhat lower at present than those I quote.

The criticisms of the gentlemen on what they assume I said regarding the discovery of tin deposits in Colorado, and its suppos on the price of and the manufature of tin plates in this country, are founded on what I am supposed to have said in an interview with one of our city paper reporters. He misunderstood me and got \$20 in, in place of 20 cents. A slight difference, 'tis true, but sufficient to place great value on Mr. Trick's demonstration. I have in all on Mr. Trick's demonstration. I have in all my letters invariably claimed that it is my did in their presentation of figures as I to be, or, if they desire to continue as country, unless it be in very large and rich deposits, will not materially affect the present price of tin. It is now free of duty, the present price is maintained in England in

Condition of the Anthracite and Bituminous Furnaces of the United States, August I, 1884.

| August 1. | | | ANTHRAC | CITE. | | BITUMINOUS OR COKE. | | | | | | |
|-------------------------------|---------------|------------------|-----------------------|-------------------------|-----------------------|---------------------|------------------|-----------------------|-------------------------|-----------------------|--|--|
| Districts. | Total number. | Number in blast. | Capacity per week. | Number out of blast. | Capacity per week. | Total number. | Number in blast. | Capacity per week. | Number out of blast. | Capacity per week. | | |
| New England | 1 | 0 | 0 | I | 160 | | | | | | | |
| New York. | 41 | 15 | 4,000 | 26 | 6,325 | | | | | | | |
| New Jersey | 18 | 3 | 940 | 15 | 3,925 | | | | | | | |
| rennsylvania: | | | 1 | | 0,,, | | | | | | | |
| Lehigh Valley | 51 | 24 | 7,345 | 27 | 7,030 | | | | | | | |
| Schuylkill Valley | 46 | 18 | 4,775 | 28 | 6,085 | | | | | | | |
| Upper Susquehanna Valley | 25 | 12 | 3,739 | 13 | 2,420 | | | | | | | |
| Lower Susquehanna Valley | 41 | 22 | 5.135 | 10 | 2.880 | | | | | | | |
| Pittsburgh | | | | | | 17 | 9 | 7,330 | 8 | 6,500 | | |
| Allegheny Valley | | | | | | 4 | 2 | 585 | 2 | 162 | | |
| Shenango Valley | | | | | | 30 | 6 | 3,590 | 24 | 7,880 | | |
| Youghiogheny Valley | | | | | | 6 | 2 | 730 | 4 | 1,166 | | |
| Juniata and Conemaugh Valley | | | | | | 26 | 13 | 4,494 | 13 | 2,845 | | |
| daryland | | I | 120 | 4 | 700 | 2 | 0 | 41434 | 2 | 230 | | |
| Virginia. | 3 | | *** | -4 | 100 | 14 | 5 | 2,151 | 0 | 3,220 | | |
| Vost Virginia | | | | | | 7 | 0 | 2,131 | 7 | 2,726 | | |
| Ohio: | | | | | | / | 0 | 0 | 1 | 2,720 | | |
| Dhio: Mahoning Valley | | | | | | 18 | | 0.000 | | | | |
| Eastern, Central and Northern | | | | | | 20 | 5 | 2,920 | 13 | 4,590 | | |
| Hocking Valley | | | | | | - | 7 | 2,960 | 13 | 5,050 | | |
| Hanging Pook | | | | | | 15 | 8 | 242 | 13 | 2,360 | | |
| Hanging Rock | | | | | | 15 | - | 1,550 | 7 | 1,085 | | |
| Centucky | | | | | | 3 8 | 2 | 800 | 1 | 400 | | |
| ennessee | | | | | | | 6 | 2,620 | 2 | 980 | | |
| leorgia | | | | | | 1 | I | 600 | 0 | 0 | | |
| llabama. | | | | | | 9 | 6 | 3,280 | 3 | 1,220 | | |
| ndiana | | | | | | 2 | I | 200 | I | 200 | | |
| llinois | | | | | | 16 | 10 | 8,275 | 6 | 3,700 | | |
| lichigan | | | | | | 2 | 0 | 0 | 2 | 580 | | |
| Visconsin | | | | | | 3 | 2 | 1,000 | 1 | 540 | | |
| lissouri | | | | | | 8 | ī | 550 | 7 | 3,810 | | |
| Total | | 95 | | | 29,525 | 226 | 88 | 43,877 | 138 | 49,244 | | |

mencing to make them. They seem to dispute this, and point to the evidence of Mr. Rogers, who was at one time connected with the Leechburgh Works, as proof of my mistake. They point to the fact that Mr. Rogers did make tin plates successfully, and was able to sell them in competition with English makers. I admit this to be true, and to Mr. I may be asked, why is it that tin plates could be made from 1873 to 1877—the period in which tin plates were manufactured here? The answer is brief: Because the price of tin plates was so high as to allow American makers a margin for profits, paying high wages. It is somewhat strange that these gentlemen have overlooked this thought. The plates in 1872 sold as high as \$12 and \$2.5 and \$2.5 and \$2.5 and \$3.5 and \$ Tin plates in 1873 sold as high as \$12 per box in this country; in 1875, good quality coke plates sold at \$8.50 per box, and in 1878 they were down to \$5.25 per box. The American works had ceased before tin plates reached this lower price, and have never since been able to resume. The companies owning these works were completely broken up, and I believe that the company Mr. Rogers was connected with became insolvent, with liabilities something like \$200,000 in excess of assets. I will hardly dispute the point raised, "that much astonishment is expressed by Mr. Rogers that the manufacturers in this country have not entered into the ers in this country have not entered into the manufacture of tin plates, when they can secure the cheapest and best fuel (natural gas) in the world for its manufacture." I will only add that we have the best-paid labor in the world to provide for, and our astonishment is that Congress has not as yet seen clear to put sufficient tariff on tin plates as to enable our manufacturers to go into the as to enable our manufacturers to go into the

duction of the praces, but which they say would be prejudicial to their personal and private interests to publish. Have they any objections to publish the list of wages they intend paying? This is really the pith of the intend paying! This is really the pith of the argument. I am prepared to show in detail their arguments in favor of a protective that a ton of pig iron in this country at \$20 per ton represents \$7 more wages paid than a ton of pig iron in Wales at \$12 per ton. In former part of this letter I have sho that the wages paid to make a ton of sheet bars in this country is over \$8 in excess of that paid in Wales. In my former letter I stated that the labor to produce a box of timplates from bars in Wales amounted to 87 cents. In this country the same labor would amount to \$2.26 per box. I am prepared to give an itemized statement at any time. The labor expended and wages paid in this coun-try on 20 boxes in excess of that paid in Wales may be summarized thus:

Excess in wages on 13-10 tons of pig iron at \$7 Excess in wages on i 1-5 tons of bars at \$3... Excess of wages on 30 boxes of tin plates at \$1.30... Total excess in wages....

have no doubt but that these figures will be ridiculed, and attempts may be made to make it appear, as we see it hinted in their last etter, that we have cheap fuel, &c. It may be argued again that the price of pig iron is much lower than I put it, and other excuses may be advanced, but I wish them to come out square on this question of wages. What-

reason as will prevent these men from com- objections to enter into general costs if necessary, and, believing it will be of general interest, I have inserted a cost sheet of tinplate production in Wales, which, while rough, is near enough for all practical pur-

ROUGH COST SHEET TIN PLATES

| Colo | | |
|--|------|-----|
| Coke. | | |
| | g. | d. |
| Iron, 1 cwt. 1 qr. to 1 box, at 6/ per cwt., bas | 7.7 | 6 |
| Less scrap at 3/6, 28 b | | 10 |
| | - | |
| Net cost of bar | . 65 | 8 |
| Tin, 316 to 1 box, at 10d, of 14 x 30-11 | 2 | |
| sheets | .2 | 11 |
| Labor, bar to finish | 8 | 6 |
| Coal | | 6 |
| Vitriol, black and white pickling | | 6 |
| Paim oil | | - |
| Bran | | 1 |
| Boxes | | 3 |
| Anneal pots | | 116 |
| Rents and taxes | | 116 |
| Management, &c | | 3" |
| Machinery, wear and tear, &c | | 9 |
| Carriage, &c | | 0 |
| Discount, 4 \$ | | H |
| | | - |
| Net 1 box I C, 108 % | 16 | 4 |
| Charcoal. | | |
| | | d. |
| Iron, 1 cwt. 1 qr. to 1 box at 8/ | 10 | 00 |
| Less scrap | .1 (| 00 |
| | - | |
| Net cost of bar | | 00 |
| Tin, 5 fb at 10d | 4 | 2 |
| Labor, bar to finish | | 6 |
| Coal | | 6 |
| Vitriol, black and white pickling | | 6 |
| Palm oil | | 8 |
| Bran | | 1 |
| Boxes | | 8 |
| Anneal pots | | 136 |
| Rent and taxes | | 116 |
| Management, &c | | 3 " |
| Machinery, wear and tear | | 2 |
| Carriage, &c | | 9 |
| | | - |

Many useful inferences may be drawn from this cost sheet, but I shall allow the reader

to work out his own.

In conclusion, I would wish to impress
Messrs. Trick & Hutchings that I have no
desire to put anything in their way to success. We are using all honorable means to In answer to the question, "And has he (myself) quite forgotton his conversation with Mr. Hutchings?" In answer: No, in the importance of this great industry, deed. I remember it all, and have not changed one iota in my opinions as then expressed. Messrs. Trick & Hutchings claim to have figures of costs compiled in the production of tin plates, but which they say already had two years' experience. And as they have declared their intentions of becoming American citizens, we invite them, as welding temperature, as it should be when ing American citizens, we invite them, as welding temperature, as it should be when practical tin-plate manufacturers, to utilize rolling steel of this kind. By being able to their arguments in favor of a protective reduce carbon manganese and silicon to such tariff, so that we can not only build up the consumers good material and give good value for their money, and living wages to a host of workingmen. Truly yours, JOHN JARRETT.

PITTSBURGH, Aug. 2, 1884.

The Manufacture of Steel Nails.

To the Editor of The Iron Age: On the 11th day of May last the first blow was made at the Riverside Iron Company's Bessemer-steel plant, a general plan and description of which appeared in *The Iron Age* of April 3, 1884, so I shall not enter into the details. Suffice it to say that it was designed by and constructed under the direc-tion of Mr. Charles Amsler, its present superintendent, and is well adapted to turning out the kind and quantity of steel for which it was intended. It is scarcely neceswhich it was intended. It is scarcely necessary for me to state that this mill was erected expressly for the production of soft steel to take the place of iron in the manufacture of nails. It was predicted by many that the new venture would result in a distance of the place of astrous failure, the reason being that it would be impossible to produce a steel suffime, \$20 per ton in this country, against \$12 per ton in Wales, they claim I am in error. Pig iron, they say, can be bought here at \$15 per ton and in the South at \$12 per ton, or as cheap as it is in Wales. In this case I quoted \$20 per ton as being the prices at the fur-works; they quote the prices at the fur-

other processes. Notwithstanding these adverse predictions, the Riverside Company began and rapidly pushed forward the work of erecting their new plant until the time above stated, since which time they have above stated, since which time they have been producing steel that has been and is giving entire satisfaction. It has not only been clearly and forcibly demonstrated that it is possible to produce Bessemer steel nails that are as good and reliable as iron, but it has been demonstrated beyond a doubt that they are a much finer and better nail in every respect than those made from puddled iron, being smoother and of closer grain, and presenting a much finer appearance.

One of the great objections to iron nails is their brittleness. For instance, take an iron nail, strike it on one side with a hammer, and before it has been bent to angle of 20° it will have broken. On the other hand, take a steel nail such as is being manufactured by the Riverside Company, and it can be bent double without showing any sign of fracture whatever; or, in fact, you may subject it to the severest tests possible, and in every one it will stand a much better test than the iron at will stand a much better test than the iron nail. It was thought by many that steel to be soft enough to cut easily would be too soft for nails, but this is not the case, for I have seen these nails frequently driven into the hardest oak and locust without showing any sign of bending whatever. I have not only seen them driven point first, but I have also seen them driven head first, into a hard-oak plank, which I consider a very sever test. plank, which I consider a very severe test,

plank, which I consider a very severe test, In regard to the uniformity of the steel produced by this process for nails and other purposes, I believe we have demonstrated beyond a doubt that it is by far the better one, where uniformity and reliability are desired. We have been blowing since the 11th day of May, making in all 500 blows with a variation in carbon of \$r_0^3\text{of}\$ per cent. In fact, we usually 12n our carbons at \$r_0^3\text{of}\$ per cent, seldom, if ever, going above or below this point. Our manganese runs with the same uniformity, being very low—in fact, lower than usually found in Bessemer steel. We have also succeeded in reducing the silicon to such a low degree as to permit the steel to be welded as easily as puddled iron. In fact, the so-called steel we are producing is nothing other than ingot or homogeneous iron. The quite high in other impurities, such as phos-phorous, sulphur, copper, &c. Of course, if the product was intended for purposes other than nails, it would not be desirable to use irons high in these impurities. The superiority of this material over iron

produced by the puddling process cannot reasonably be disputed. Its superiority con-sists in its being more solid and uniform throughout the ingot, thereby producing a much solider bloom. This is brought about much solider bloom. This is brought about by its being cast when in a state of high fluidity, which necessarily gives a more com-pact and solid, as well as more uniform, ingot than can be produced by any system of pil-ing. In regard to the rolling and cutting quality of this material I do not see how it could be better, it being much better than that of iron. At least this is the testimony of quite a number of nailers who have been cutting this material since its introduction One prominent and noticeable feature in rolling this steel is the absence of ragged edges and ends, and the smoothness and cleanness of the plates when finished. Not with tanding the success that has attended the Riverside Company in their new venture, it has been reported that quite a number of

THE TWO-WHEELED CASTER CONTROVERSY.

To the Trade and all others whom it may concern:

The Yale Caster Company, of New Haven, Conn., have been infringing upon our rights under A. C. Martin's patent, dated May 1, 1877, for several years past. As soon as they began to put their goods upon the market, we notified their agents and the Trade of the fact of such infringement, and that we should hold all infringers liable in damages. This notice was unheeded, and we were preparing to bring suit in the New York Circuit Court against M. B. Schenck, who claimed to be the patentee of the caster made by the Yale Company, when we discovered that the Schenck Casters were on sale in this city by Mr. Nelson Kingman, and we imm diately brought suit in the United States Circuit Court for this District for an injunction and accounting. W did not care to subject Mr. Kingman to expense, as he professed to have purchased the stove trucks to which the casters were affixed from Schenck's agents innocently. We expected, and he expected, that Schenck or the Yale Caster Company, or both of them, would defend him. But they failed and neglected to do so, and left their customer to get out of the scrape the best way he could.

Our attorney then, at our request, after waiting beyond the usual rule day, wrote to M. B. Schenck, at Fulton, N. Y., offering to waive the default we were entitled to, and extend the time for filing an answer, if he would appear and defend his customer. No answer was received, and a default was finally taken and set down for hearing before Judke Drummond. On that hearing we made full proofs, introducing in evidence the Schenck Patent, the Schenck Caster, the Martin Patent and the Martin Caster, and proved also that notice had been sent to Schenck; and on the 4th day of May, 1883, Judge Drummond made a finding of all the above facts, holding that the Schenck Caster, as shown in his Letters Patent No. 250,290, dated November 29, 1881, was an infringement of the Martin Patent, and rendered a decree of perpetual injunction in our favor, and a judgment for all costs.

The Yale Caster Company and Schenck, after the rendition of this decree, published an article in *The Iron Age*, denouncing it as a sham case, a straw decree, and then undertook to dodge its effect by claiming that they were making casters not under the Schenck Patent, but under another patent dated October 9, 1877. To this blast we replied through *The Iron Age* that but two patents were issued for casters on October 9, 1877, and neither of these were for double-wheeled casters, but for casters having, one a ball in a socket and the other a single floor wheel. The Yale Caster Company then, under date of May 19, 1883, wrote us a boastful and abusive letter, strangely concluding it by inviting us to offer them terms of compromise, which we declined to do.

We then notified general agents at Chicago, Messrs, Munger, not to handle any casters infringing Martin's Patent, and sent them a printed copy of the decree in the Kingman case.

Here the matter rested until early in this year, 1884, we discovered that Messrs. Spiegel, Thoms & Co., of this city, furniture manufacturers, were using the Yale Caster upon their goods, and on inquiry found that they

had bought them of John Duer & Co., of Baltimore, Md., who are the agents of the Yale Caster Company. We immediately brought suit against them in our United States Circuit Court for an injunction and accounting. At the proper time an answer was filed for the defendants, and we have just concluded the taking of our testimony in chief, and among other things we proved by competent experts:

1st. That the caster now sold to the Trade by the Yale Caster Company is an infringement of Martin's Letters Patent.

2d. That before Martin's Patent no caster had ever been known or made having two floor wheels, which was adapted to oscillate in a vertical plane and revolve in a horizontal plane

3d. That the attorney appearing for the defendants, Spiegel, Thoms & Co., was not known to or employed by them, but by M. B. Schenck, acting for himself and the Yale Caster Company.

And thereupon we further put in evidence models of the Yale Casters, the Schenck Patent, the Yale Company's circular and their polite (?) letter to us before mentioned, and we further proved that the date of the patent stamped on their casters, "Patented October 9, 1877," was deceptive, and that no double-wheeled caster was patented on that date by anybody.

We cordially invite the Yale Caster Company and M. B. Schenck to prove the truth of what they set up for the defendants in their answer, that the Kingman suit was a "sham suit" or a "straw decree," or entered by collusion with anybody. They know such statement is false, and dare not try to prove it.

And now to the Trade we say once more we are in bitter earnest, and will prosecute every concern that handles these infringing goods. We are in this fight, and shall stay till the end. Our trade has been damaged, our rights violated, and the firms who have been so eager to try cheaper goods will find them to cost more in the end.

And this circular is intended to be a warning to every dealer that we shall hold him responsible as an infringer if he deals in these infringing casters. We have, by many years' labor and at great expense, built up a lucrative and honorable trade in our casters, and we are not going to stand by and see our good ship either plundered or scuttled by pirates. On the contrary, we shall use every weapon known to the law and legitimate warfare in defense of "our rights, our fortunes and our sacred honor."

For the Phœnix Caster Company,

INDIANAPOLIS, Ind., July 10, 1884.

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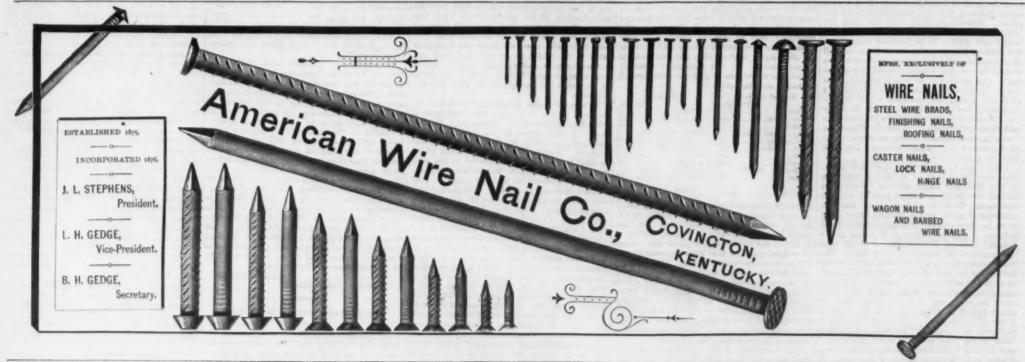
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WANTED—A situation as Traveling Falcaman by a young man of twenty-five, with eight years' experience in the Hardware bounces, b th upon the road and the Hardware bounces, b th upon the road and man the Hardware bounces, b the upon the road and man the hardware better and North ra Data Western Hinnesota and Easit ba roads Good reasons given in require, for wishing to change houses Will take new territory, if required, Can give fir t-clas- reference. Address "L", Lock Box No. 514, Fargo, Dakota.

WANTED.—A steady situation by a practical Machinest to have charge of Wachinery, or as Chief En theer: 35 years' experience in building and erect intelligence; also good experience in Bast Furnace and Rotting Mill. References sent if required.

Address "PRACTICAL MACHINET."

Office of The Iron Age, 83 Reade St., New York.

Special Notices.

E. BISSELL & CO.,

AUCTIONEERS.

Large Special and Peremptory Sale of

HEAVY AND SHELF HARDWARE

Table and Pocket Cutlery, &c.,

On TUESDAY, WEDNESDAY, THURSDAY and FRIDAY,

Aug. 12th, 13th, 14th and 15th, At 10 o'clock, a. m., Each Day, AT 83 CHAMBERS and 65 READE STS., NEW YORK.

AT 83 CHAMBERS and 65 READE STS., NEW YORK.

The sale of Hardware will commence on Tuesday, Aug. 12th, at 10 0'clock, a m.. and will comprise invoices of all kinds of Shelf Hardware and Edge Tools direct from the manufacturers. Also 500 dozen Cast-Steel Hatchets and Hammers, 50 dozen Solid-Forged Steel Hatchets. 100 dozen Axes, 300 dozen Auzer Bits, 600 Double, Smooth, Jack and Fore Planes, 100 Parallel Vises, 4000 lbs. Cast-Steel Siedges and Hammers, 160 dozen Whit. Cast-Steel Siedges and Hammers, 160 dozen Whit. Cast-Steel Siedges and Hammers, 160 dozen Mills. Flat and Taper Files, assorted sizes; 50 dozen Mills. Flat and Taper Files, assorted sizes; 50 dozen Mills. Flat and Taper Files, assorted sizes; 50 dozen Mills. Flat and Taper Files, assorted sizes; 50 dozen Mills. Flat and Taper Files, assorted sizes; 50 dozen Mills. Flat and Taper Files, assorted sizes; 50 dozen Mills. Flat and Taper Files, assorted sizes; 50 dozen D. H., 30 pt. Snovels; 160 dozen D. H., 40 pt. Shovels; 50 dozen D. H., 40 pt. Shovels; 70 dozen D. H., 70 pt. Shovels; 70 dozen D. H., 80 pt. Shovels; 70 dozen D. H., 80 pt. Shovels; 70 dozen D. H. Shovels; 70 dozen D

WEDNESDAY, THURSDAY and FRIDAY,

Aug. 13th, 14th and 15th,

BARGAINS.

We offer, for account of whom it may con-

Two Perfectly New and Complete PRATT & WHITNEY CO.

ENGINE LATHES. 1. 10 ft. Bed by 16-in Swing; Gibbed Carriage, Compound Rest, Automatic Cross-Feed, Taper Attachment, Hollow Spindle, Large Face-Vlate, Stationary and Foliow Rests, Wrenches, Counter-shaft, &c.

Manufacturers' Price, - \$683. Our Cash Price, - - \$580.

2, 10 ft. Bed by 21-in, Swing; same constructions the 16-inch, including Taper Attachment. Manufacturers' Price, - \$930. Our Cash Price, Or for the Two Lathes, \$13.05.

Correspondence solicited. P. G. MARCH & CO., Cincinnati, Ohio.

To Brass Foundries. To Brass Manufacturers.

Our new foot press, for cutting off GATES from brans castings by FOOT power, is now ready. Weight, 26 bbs. Price complete, \$50, not. A boy can operate the casily. We warrant them to give the most perfect eathsfaction. FERRIESS FUNCH AND SHARE CASE.

38 W. Dey Street, New York.

For Sale.

In one of the most thriving towns in New England, with a population of over 6.co. an old and established S ove. Hardware and House Furnishing Store. Neck clean and near. For any further particulars, address "B. C. T.,"

Office of The Iron Age, \$3 Beade st., New York.

Wanted.

Situation as Superintendent or Foreman of Rolling Mills, Forges and Meltang Departments by practical man of 23 years' experience in Cast. Blister and all kinds of Besseuer Steels, Qualities Carbons, Tempers required to suit all purposes. Economical Manager of material and men. First-class reterences. Address "EXPERT,"

Office of The Iron Age, \$3 Reade St., New York.

Wanted.

Position as Chemist in an Iron or Steel works laboratory by a young man. Have worked on Limestone Iron Ore, Coal, Slag 1 nd Silicon, Sulphur, Phosphorus, Manganese and Carbon in Iron and Steel. Can furnish balance and necessary apparatus for work. Address W. M. GIBSON, Portsmouth, Ohio.

Wanted.

An experienced man to fill position of General Manager or Superintendent of a Company energed in manufacturing and dealing in Flumbers', Cas and Steam Fitters' Tools and cupplies: must be able to handle his men and acquainted with the business in all its details. Correspondence solicited and references required.

Address

No. 605 Dunham Ave., Cleveland, O.

HARDWARE MANUFACTURERS.

with the Jobbing Hardware and Heavy Hardware
Trade from Chicago to Salt Lake City, wishes
the agency at Chicago for some first-class Eastern
manufacturer. Address P. O. Box 536,
Chicago, Ill.

A good, reliable man, acquainted with Light
Brass and Iron Work, capable of managing about
155 hands to best advantage.
Address "LiGHT BRASS."
Office of The Iron Age, 53 Reade Street, New York,
giving references, what experience and salary ex-An experienced man, personally acqueinted

Special Notices.

NEW AND SECOND-HAND

MACHINERY.

I Gap Lathe, 7 ft. swing, 4r ft. bed. 2d-hand.

I Buil Lathe, 50 in, awing, 6½ ft. bet, centers. 2d-h.

1 42 in. Boring Lathe, 6 ft between centers. 2d-h.

2 in. Boring Lathe, 8 ft bed. 2d-hand.

I Engine Lathe, 70 in. swing, 18 ft. bed. 2d-hand.

I Engine Lathe, 30 in. swing, 18 ft. bed. 3d-hand.

I Engine Lathe, 30 in. awing, 18 ft. bed. 3d-hand.

I Engine Lathe, 21 in. awing, 21 ft. bed. 3d-hand.

I Engine Lathe, 21 in. awing, 21 ft. bed. 3d-hand.

I Engine Lathe, 21 in. swing, 21 ft. bed. 3d-hand.

Engine Lathe, 21 in. swing, 21 ft. bed. New.

Engine Lathe, 20 in. swing, 21 ft. bed. New.

Engine Lathe, 20 in. swing, 21 ft. bed. New.

Engine Lathe, 20 in. swing, 2 ft. bed. New.

Engine Lathe, 20 in. swing, 3 ft. bed. New.

Engine Lathe, 10 in. swing, 10 ft. bed. New.

Engine Lathe, 10 in. swing, 10 ft. bed. New.

Engine Lathe, 11 in. swing, 10 ft. bed. New.

Engine Lathe, 18 in. swing, 10 ft. bed. New.

Engine Lathe, 18 in. swing, 10 ft. bed. New.

Engine Lathe, 18 in. swing, 17 ft. bed. New.

Engine Lathe, 18 in. swing, 18 ft. bed. New.

Engine Lathe, 18 in. swing, 2 ft. bed. New.

Engine Lathe, 18 in. swing, 2 ft. bed. New.

Engine Lathe, 18 in. swing, 2 ft. bed. New.

Engine Lathe, 18 in. swing, 2 ft. bed. New.

Engine Lathe, 18 in. swing, 3 ft. bed. New.

Hand Lathe, 10 in. swing, 3 ft. bed. New.

Hand Lathe, 10 in. swing, 3 ft. bed. New.

Hand Lathe, 10 in. swing, 3 ft. bed. New.

Hand Lathe, 10 in. swing, 3 ft. bed. New.

Hand Lathe, 10 in. swing, 3 ft. bed. New.

Hand Lathe, 10 in. swing, 3 ft. bed. New.

Hand Lathe, 10 in. swing, 3 ft. bed. New.

Hand Lathe, 10 in. swing, 3 ft. bed. Schand.

Iron Planer to plane 32 in. x in. swin, 3 ft. bed.

Oval Turning Lathe 2d-hand.

Iron Planer to plane 32 in. x in. swin, 3 ft. bed.

Iron Planer to plane 33 in. x in. swin, 3 ft. bed.

Iron Planer to plane 24 in. x 4 ft. sw. Sch. 2d hd.

Iron Planer to plane 24 in. x 24 in. x 5 ft. New.

In pright Drill, 10 de hand.

Shaping Machine, 10 in. swing, 2 ft. hand.

10 in. Dright Drill, 2d-hand.

10 in. Dright Drill, 2 2 Emery Grinders on Stand. New.
5 Emery Grinders for beach work. New.
5 Emery Grinders for beach work. New.
6 Polishing Frames, for wood wheels, sd-hand.
12 Pair Polishing Frames, for wood wheels, sd-hand.
13 Flair Polishing Frames, New.
3 Shafting Straignteners. New.
3 Shafting Straignteners. New.
1 Power Punch to nunch ½ hole in ½ in, iron.
1 Power Punch in on nunch ½ hole in ½ in, iron.
1 Power Punching Press. sd-hand.
1 No. 13 Adjustable Inclined Power Press. New.
1 No. 2 Adjustable Inclined Power Press.
2 Adjustable Inclined Power Press.
2 Adjustable Inclined Power Press.
2 New.
2 No. 2 Serew Press on Legs. New.
2 Serew Press on Legs. New.
2 Large Foot Press. 2 Adhand.
3 Smail Foot Press. 2 Adhand.
3 Smail Foot Press. 3 Adhand.
4 No. 1 Serew Press. 3 Adhand.
5 No. 1 Poot Press. 7 1. guides. 3 Adhand.
6 No. 1 Norp Press. 7 1. guides. New.
1 2 in Drop Press. 3 Adhand.
7 in. Drop Press. 5 Adhand.
7 in. Drop Press. 5 Adhand.
9 New 1 Straignt Shears 1 New.
1 Adjustable Shears New.
1 Hand Lever Punch to bunch 4-16 is 4-16 iron.
1 Heavy Alligator Shear, 17 in. Jaws. 3d-hand.
9 Power Slitting or Circular Shears New.
1 Grared Power Slitting Machine. No 6 Iron. New.
1 Circular Shear for No. 12 Iron. 3d-hand.
2 Squaring Shear, with open throat, for power.
2 Pair to fis Power Bending Holls. 3d-hand.
2 Pair 6 ft. Bending Rolls. for hand power.
1 Double End Fower Bending Holls. 3d-hand.
2 Geared Bar Iron Cutters for 1 in. iron. 3d-hand.
2 Geared Bar Iron Cutters for 1 in. iron. 3d-hand.
2 Geared Bar Iron Cutters for 1 in. iron. 3d-hand.
2 Geared Bar Iron Cutters for 1 in. iron. 3d-hand.
3 in. Pair 10 ft. Forence Bending Machine. New.
1 Seroll Saw, complete. New.
1 Large Lot Puleys and Hangers. 3d-hand.
2 Geared Bar Iron Cutters for 1 in. iron. 3d-hand.
3 in. Pair 10 ft. Forence Bending Machine. New.
1 Seroll Saw, complete. New.
1 Seroll Saw, complete. New.
1 Seroll Saw, complete. New.

For Sale.

A full line of Hardware, Stoves, Iron and Tinware, centrally located in the largest and best manufacturing city in Northern Inciana. Well established, with an excellent trade. S.ock clean; will invoice about \$10,000. Address "X. Y. Z. & Co.,"

Office of The Iron Age, 36 Clark St., Chicago, Ill. Wanted.

By a married man with a large acquaintance with the trade of Minnesota, Dakota, Montana, and part of Wisconsin, also Province of Manitoba, a position to represent Manufacturers of Hardware either on commission or salary, with headquarters at St. Paul or Minneapolis. kxporience of more than twenty (20) years in the trade.

Address,

Lock Box 57. Alexandria, Minneapolis Address,

Lock Box 57, Alexandria, Minn.
Satisfactory ref c rences it desired.

LAMBERSON'S COPYRIGHTED

Hardware Price Books. A Revised and Improved Edition of my Pocket Price Book is now in the hands of the printers, Size of book, 4 x 7 in ; 250 pages ; price \$4.00 each.

BUELL LAMBERSON,

Wanted—Superintendent.

Drawer st, Portland, Oregon.

7, 1884.

5.

ND

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Special Notices.

New and Second-hand MACHINERY.

THE GEO. PLACE MACHINERY CO., 121 Chambers St., New York.

For Sale.

ONE 75 H. P. FITCHBURG AUTOMATIC CUT OFF ENGINE.

One 40 H.-P. Fitchburg Automatic Cut-off Engine ALSO

ENCINES AND BOILERS

of every description. All in good order and ready for immediate shipment.

Correspondence solicited. Prices guaranteed Sections are quoted at £4. 15 @ £4. 17/6, the lowest. Write for catalogue

H. M. SCIPLE, Dealer in all kinds of MACHINERY, 207 and 200 North 3d St., Philadelphia.

For Sale.

The largest stock of New and Second-hand Engines, Boilers, and general Machinery in the West, Send for Catalogue. Hoisting Outfits for Coal Mining and other purposes a specialty. WARREN SPRINGER.

195 to 219 South Canal St., Chicago.

For Sale.

Becond-hand

DROPS and LIFTERS.

BEECHER & PECK.

Lock Box 122, New Haven, Conn.

WANTED. Business Managar, with capital; manufacturing business. Specialty in steel; well established: doing a good, regular business; production stands at head of market: many of its articles protected by patents. It is located in one of the principal business centers of the Connecticut Valley. Shipping facilities unequaled, freight depot being within soc feet of factory and same distance to the compary's dock on the premises. We need a good business man wit: some capital to manage the financial part, increase the line manufactured and furnish a working capital. Can refer to prominent manufacturers and private individuals. Investigation solicited. Address "SWAGER." Office of The Iron Age, 83 Reade Street, New York.

Wanted-Partner.

either active or special, with \$25,000 to \$40,000, to join an established wholesale Hardware business in the West. A good opportunity for party desir-

Office of The Iron Age, 83 Reade St., New York,

To Manufacturers of Machinery.

Having opened a large depot for the sale of Iron, Wood and Textile Machinery and Supplies, and an agency for exhibiting machinery at the Southern Exposition, which is to open in Louisville, Ky., August 15, 1834, and continuing 60 days, correspondence with manuscurers wishing to place their products in this market, and those wishing to be re-presented at the exposition, is solicited. Manuf cturers of machinery are requested to send us caralogues and prices of their goods.

KENTUCKY MACHINERY CO.,
Main St., bot, 12th and 13th, Louisville, Ky.

WILL OFFER below market .ates the folowing:

LOCKS, SCREWS AND STRAP AND T HINGES.

A. W. WHEELER,

141 Lake Street, Chicago, Ill. WANTED-A reliable and capable Tin Plate Salesman to travel West, by a Philadelphia

Metal House. None other need apply. State sa!ary expected and give references. "TIN PLATE,"

Office of The Iron Age, 220 S. 4th St., Philadelphia. WANTED—A position of responsiolity and trust in a marufacturing company or jobbing house, by a gentieman 33 years of age, who has been with a large manufacturing company nearly 15 years, first as tookkeeper, then as secretary and later as secretary and manager of the business. Can furnish the best of references as to character and ability. Address "A. B. C.—so," Office of The Iron Age, 8; Heade St. New York. Pirm of English merchants and manufacturers require, January 1, 485, an agent in New York, to obtain orders for English Saddlery, Sheep shears, Chains, General Hardware, &c. Payment by commission. Security and references required. Apply BOX 21, Post Office, Walsail, England.

Trade Report.

British Iron and Metal Markets.

[Special Cable Dispatch to The Iron Age.]

LONDON, WEDNESDAY, August 7, 1884. Scotch Pig.-The market is quiet, at unchanged prices. We quote makers' brands

Lighterage from Ardrossan to Glasgow is 1/ 9

Cleveland Pig-Is not so steady. Prices are unchanged. We quote as follows, f.o.b. shipping ports:

Bessemer Pig.-Market continues irregular. We quote W. C. Hematites $44/6\ @$ 46/ for mixed lots, Nos. 1, 2 and 3, equal portions, f.o.b. shipping ports.

Manufactured Iron.-The market continues irregular. We quote at works:

| - | | £ | 8. | d. | £ | | 9. | d |
|----|-----------------------------|-----|-----|----|-----|----|-----|----|
| | Staff. Ord. Marked Bars | 7 | 10 | 0 | 0 | | | |
| | " Medium " | 6 | 0 | 0 | 0 | 6 | 10 | - |
| | " Common " | 5 | 10 | 0 | @ | 5 | 15 | (|
| | Hoops, 20 W. G. and over. | | | | - | | | |
| | " Common Best | 6 | 15 | 0 | 0 | | | |
| | " Medium | 6 | 5 | 0 | 0 | 6 | 10 | (|
| | " Common | 6 | 0 | 0 | 0 | 6 | 7 | - |
| Э, | Sheets, 20 W. G. and under. | | | | | | | |
| | " Ordinary Best | 7 | 15 | 0 | 0 | 8 | 5 | (|
| | 4 Common | 7 | 0 | 0 | (0) | 7 | 10 | (|
| | Weish Bars | 4 | 17 | 6 | 0 | 5 | 2 | - |
| У | Steel Rails-Are unci | nar | ige | 1. | O | rd | ina | rv |

f.o.b. shipping ports.

Old Rails-Are unchanged. We quote Old D. H.'s, £3 @ £3. 5/, c.i.f. New York.

Scrap.-The market is unchanged. Heavy Wrought is quoted £2. 10/@ £2. 15/, c.i.f. New York; Bessemer Crop Ends, run of the mill, are quoted 52/6 @ 54/6, f.o.b. shipping ports.

Copper.-The market is a little firmer. We quote Best Selected, £59 @ £59. 10/, and Chili Bars, £54. 15/@ £55. 5/.

Tin .- The market is steadier. We quote Straits Ingots, spot, £83. 5/ @ £83. 15/, and futures, £83. 10/ @ £84. 5/.

Tin Plates-Are firmer. We quote : Tin Plates, 10x14, 1st qual. Charcoal....19/6 @ 21/6 " 2d " " ... 12/6 @ 19/
" 1st " Coire ... 17/6 @ 18/
" 2d " " 15/ @ 15/6

@ £14. 5/. Lead .- The market is quiet. We quote Common English Pig, £10. 10/ @ £10. 15/.

Freights.-Steam from Glasgow to New York, 3/6 @ 4/; Liverpool to New York, 5/; Liverpool to Philadelphia, 5/@ 6/6, and London to New York, 7/6 @ 9/6.

Financial.

Office of The Iron Age, Wednesday Evening, Augus 6, 1864.

said that there is much actual improvement. The better feeling is mainly based on a more Europe which may possibly become impor-

tried," he said, "to keep the gold reserve up from this port during the past week, the to \$140,000,000, which was the legal require-total being \$6,830,561, against \$210,274,002 ment under the old law, but the recent acts for the same week last year. The shipments still unchanged. of Congress have permitted the depletion of of wheat were quite heavy, aggregating for the Treasury reserve." The Secretary said the four ports of Antwerp, London, Liverthat the banks would undoubtedly receive pool and Glasgow alone some 668,571 bush-the silver certificates. In the contingency els, although other breadstuffs are moving here foreshadowed the Treasury will suspend out very slowly. There has also been a contion; but, in the opinion of the Assistant Treasindefinitely deferred by the arrivals of gold from Europe. For the same reasons many bank officials think that any agitation of the subject now is premature, while others ver bars, making a total of \$46,000,000 since indications are that the rise in sterling, mainly caused by remittances for stocks sold Havana and South America. on European account, will temporarily check the expected receipts.

> those which preceded it for several weeks serve is decreased about \$500,000; otherin moving the crops as well as to meet any easy and there is a limited sale for double- preceding. name paper at 5½ % @ 6 %. The most acceptable is bills receivable representing actual sales of merchandise. Respecting money in the West, the Chicago Tribune says: "Until very recently there has been a strained, nervous feeling. Everybody has been afraid of his neighbor. The banks have hesitated to lend, the people have hoarded, and there has been every sign of distrust. It would be too much to say that this is all over, but there is a marked improvement "

A belief is expressed that the action of the New York Clearing House in adopting the recommendation that no member of the asociation shall pay interest on deposits after January 1, 1885, is not likely to be carried into effect. One authority says: "Unfortunately, it is impossible to make the resolution operative except through a ratification by the individual banks, and we fear so large a minority will withhold their approval, and therefore uphold the practice, that the proposition will again fail, as it did, and for the same cause, in 1857 and in 1873."

Returns from the clearing houses in leadcities throughout the United States show some improvement. The relative large gain in New York City is doubtless due to more activity in stock speculations. In Bal-" " 1st " Coke 17/6 @ 18/
" " 2d " " 15/ @ 15/6

Spelter.—The market is unchanged. We quote Ordinary, at shipping ports, £14. 2/6 improved." In the South, business is generally reported dull. In Montreal trade has much improved, and "promises a steady development during the remainder of the season." There were 241 failures in the United States reported to Bradstreet's during the past week, as compared with 225 in the preceding week, and with 155, 105 and 75 respectively in the corresponding weeks of 1883, 1882 and 1881.

On the Stock Exchange the market has been changeable, but, as a whole, the recent advance has been well sustained. On Thurs-Advices from leading commercial points day the rise was supposed to have culare of a more cheerful tenor, but it cannot be minated. Northwest at one time advanced nearly 5 %, and others in a lesser proportion. The movement might have been positive assurance of bountiful harvests and stronger, but for the failure of the old tea prospects of a good export demand, together house of John Caswell & Co. On Friday with a movement in gold importations from prices were not so firm, owing to realizing sales. On Saturday Western Stock of tin in the United States on July 1..... 500 Union was a feature, advancing to Arrivals per steamers in July 1,000 tant. L. Von Hoffman & Co. have \$1,000,000 Union was a feature, advancing to en route from London, and the Bank of 64%, but prices were irregular and weak at British North America expects to receive the close. On Monday Western Union led \$500,000 before the close of the week.
Some of our down-town bankers are grangers, Northern Pacific, Oregon and Adoat from the Straits. confident that before the year closes an Transcontinental and Pacific Mail. On ... amount equal to the total of our recent Tuesday the phenomenal advance in Wall heavy gold exports will be returned. Hostilities involving one or more of the European strong on the report that a committee of the powers would enhance the demand for landholders had authority to purchase the

BOX 11, Post Office, Walsaul, England.

WANTED.—A young man having twelve years' to represent some first-class manufacture on the Pacific Coast, with headquarters at San Francisco, Cal., and fortland, Or. Best of references. Address (Cal. and Fortland, Or. Best of references. Address (P. P. O. Box 620, San Jose, Cal.

HOLLAND.

ROTTERDAM, July 17, 1994.—Tin.—The market has been and the remainder, gold reserve was reduced to \$100,000,000,000 it \$3,125,073, dry goods. Since January I the would be impossible to pay out any more imports aggregate \$263,122,138, compared with \$278,271,172 for the corresponding \$4.50 @ \$4

the payment of gold for the first time since siderable increase in the exports of cotton, and January 1, 1879, the date of specie resumpthe outward movement of petroleum improved somewhat. Since January 1 the total is urer in this city, the event is likely to be \$186,132,115, compared with \$210,274.002 for the same time in 1883. The exports of specie for the week, according to the Custom January 1, and the imports of specie for the same time were \$232,417, mostly from

The report of the Chief of the Bureau of Statistics shows a material falling off in the The weekly bank statement differs from foreign commerce of the country for the last fiscal year, ending June 30, compared past chiefly in the fact that the surplus re- with that of the year preceding. The decrease amounts to \$83,325,842 in exports wise there is little change. Loans are reduced \$1,400,000. The banks now hold more and \$55,466,351 in imports, and the "balduced \$1,400,000. The banks now hold more ance of trade in our favor" was reduced than \$30,000,000 in excess of legal require- from \$100,658,488 to \$72,798,997. The fallments, an amount nearly three times larger ing off in the exports of wheat is particuthan they had at this time last year, from larly noticeable, the decline being over \$46, which fact it is inferred that they are in 000,000, or more than one-half of the aggregood condition to make all needed advances gate loss. All the ports except Boston suffer in this branch of traffic, the exports at reasonable demand by their customer's for New York falling to a valuation of \$60,000, discount accommodation. Money on call is ooo last year, against \$83,000,000 in the year

Metal Market.

Copper.-The market has been quiet, but firm, at 14¢ for Lake Superior, at which figure 150.000 lb sold, and 13¢@ 131/4¢ other brands. London suddenly improved from £59, Best Selected, to £60, and from £53. 10/, Chili Bars, to £55 during the latter part of last week. It was supposed at the time that the cholera, having made its appearance at the port of Huelva, Andalusia, Spain, this news, cabled July 31, might have been the cause of the rise in London, Huelva being the outlet for the Rio Tinto and Tharsis Copper mines, but perhaps the news from Chili about charters or shipments thence to Europe may have been the cause of the unexpected rebound. At any rate, if shipments of Ore at Huelva are at any time stopped, perhaps for months, it can hardly fail to favorably influence the London Copper mar-ponding period last year. ket; hence news from there will be watched with considerable interest from now forward. Manufactures may be nominally quoted as under: Bottoms, 20¢; Braziers. 20¢; Sheathing, 18¢, and Bolt Copper, 20¢. We receive from London this afternoon the following by cable: "Market a little firmer. Best Selected, £59 @ £59, 10/, and Chili Bars, £54, 15/ @ £55, 5/."

Tin .- The steamer Lydian Monarch, with 300 tons of Tin on board, being reported in a disabled condition on the high seas, the fact of this Tin not arriving here when it was so much wanted has had the effect of buoying up again our market at once from the temporary weakness a week ago, when it gave way to \$18.60, and has now recovered to \$18.80 @ \$18.85, large lines, spot, and \$19, jobbing lots. At the same time London came this morning £83 and Singapore £84, cost and freight by steamer to New York. July shipments from the Straits to the United States have been 500 tons, to England 800 tons, and to the latter country from Australia 700. The deliveries during the same month in England and Holland bave been 2500 tons, but out of these 1000 tons went to the United States. Mr. Charles Nordhaus, East India agent, 13 Cedar street, New York, furnishes us the ensuing statistics:

Total Less July consumption..... 700 950 000—1,550

Visible supply August 1.... We receive the ensuing cablegram from London to-day: "Market steadier. Straits Ingot, Spot, £83. 5/@ £83. 15/, and futures,

on silver or silver certificates. "I have tory export movement of domestic produce | 5\$\ship\$. We quote Bertha Refined, 8\$\ship\$, and Sheet

Antimony .- Nothing of special interest occurs in this metal, which has been moderately active at 10%¢ for Hallett, and 10%¢ for Cookson.

Coal.

The Anthracite Coal market inclines to weakness, the tone being hardly sustained compared with one week ago. Views are various in regard to the necessity for stoppage at the mines as a preventive of accumulation, some dealers and operators having Coal in abundance, while others are straitened in their deliveries, but opinion more generally favors a reduction. Orders for Coal at the advanced prices are simply to meet current wants for consumption, and are said to be more or less shaded. The Philadelphia Record says: "Prices are steadier, but are by no means those of the circular, and both at retail and wholesale there are liberal concessions made to large purchasers. Prices to the West have been advanced, but this does not meet the approval of the entire combination, as many of its members contend that the trade does not justify the action. The Soft Coal trade is extremely quiet."

The anomalous situation in the Bituminous trade is described as follows: "The overproduction of Bituminous Coal, while partly the indirect result of the attempt to bolster up the price of Anthracite Coal artificially, took place on a far larger scale than that of Anthracite. It costs much less to open a Bituminous Coal vein than one of Anthracite, and individual operators in all parts of the State multiplied. The Clearfield Cumberland regions became overcrowded and forced capital to cross the Alleghenies until the Western Pennsylvania fields also became overcrowded. Prices steadily declined, and tonnage rates declined with them, for producers could not pay so much as before, and the railroads, in dull times, were anxious to keep what tonnage they had. Hence the competition which has proved so disastrous has been of a double character."

The total amount of Anthracite mined thus far in the year 1884 is 14,686,009 tons, compared with 16,022,430 tons for the same period last year. The total amount of Bituminous sent to the Eastern markets thus

Foreign Markets.

FRANCE.

Paris, July 21, 1884.—Metals.—In pite of the serious losses which the cholera scare entails on France in the shape of diminished traffic and all sorts of in pediments to trade, business has been tolerably brisk in this city in Metals at the decline submitted to in all but Lead. We quote Copner.—Chili Bars, 187.50 @ 142.50; Ingots and Slabs, 147.50; Best Selected, 151.35, and Pure Corocoro Ore, 145. Tin.—Bancs, 295; Billiton, 224; Straits, 223.50; Australian, 224.50, and English 220. Lead, 24.50 @ 25.50, and Spetter, 57.75 @ 28.50. Fron.—The building trade in this city has experienced no notable abatement for a week or two past, and the demand for Structural Iron continues on a fair scale, the quotation for Merchant Steel being 16 francs 29 100 kg, and 17 francs for Ficoring Iron, but it is to be presumed that there is considerable shading from these figures, advices from the Iron districts being quite unfavorable. Stocks in the interior are accumulating, and if the duliness continues a little longer, much lower prices seem inevitable. Hollow and Tin Ware makers in this city also complain of a lack of orders; the manufacturers of artistic ronses are also less actively engaged. Coal.—At the North everything proceeds satisfactorily; not so in the Loire basin. Here the market is flat, but not lower.—Moniteur des Interess Materiels. BELOIUM.

BRLGHUM.

BRUSSELS, July 2J. 1884.—Fron.—The event of the week has been the 14,000-ton Vignole Steel-Rail adjudication to supply the Government lines, deliverable next year. Cockerill, Cougree, Thy-le-Chateau, Boel and Augheur all submitted tenders, the first four at 131 and tl. latter at 135 francs ¥ ton, the job, therefore, being awarded to the four lowest. At the last adjudication of the kind on December 27, 1882, the lowest tender was 144.95. The only adjudication come off since has been for Sheets, which the Couillet Company carried off. Since these adjudications nothing of special interest has occurred except some important dealings in Common Pig Iron, which, being lowered to 5 francs ¥ 100 kg., has provoked quite a lively demand. An immediate improvement from this figure need not be looked for, however, Finished Iron selling too low. We quote English Pig, \$5.90; Luxembourg. \$5.30; Charleroi, \$6.75; Puddling, \$4 @ \$4.50; Euxembourg. \$4.40; Merchant No. 1. \$11.35 for export; for donestic use. \$9.11.09; No. 2, \$125; No. 3, \$12.75; Beams, \$12.69; El2.50; Corners, \$12.50 @ \$13; Sheets, No. 2, \$15.30; No. 3, \$17.50; Commercial, \$21.50; Thin, \$23.50, and No. 4, \$25.50. Goal —The market is not in as firm a position as previously, yet no break has occurred so far.—Moniteur Industriet.

speculators use their opportunity to bring about artificial valuations above the parity of foreign markets. At present the low prices were feverish and irregular, about artificial valuations above the parity of foreign markets. At present the low prices were feverish and irregular, about artificial valuations above the parity of foreign markets. At present the low prices were feverish and irregular, about artificial valuations above the parity of foreign markets. At present the low prices were feverish and irregular, about artificial valuations above the part of grain growers, and in control. Quotations as follows:

m. the present of grain growers, and in consequence to restrict country orders on the mer.

m. the single cloud in the financial horizon is the threatened preponderance of silver in the National Treasury, disturbing the currency. The monthly statement from Washington shows that in July the gold reserve was reduced to \$10,045,050—and decreases of \$44,661,664, or 104 per cent.

Mannyhile the total increase of silver was upward of \$4,000,000.00 inc December 1, 15. Currency 6, 1864. 1907. coupon.

Mannyhile the total increase of silver was upward of \$4,000,000.00 inc December 1, 15. Currency 6, 1865. 17. Currency 6, 1865. 1865. 17. Currency 6, 1865. 1865. 1866. 1867. 1866. 1867. 1866. 1867. 1866. 1867. 1866. 1867. 1866. 1867. 1866. 1867. 1866. 1867. 18

Trade Report.

Philadelphia.

Office of The Iron Age, 220 South Fourth St., PHILADELPHIA, August 5, 1884.

Pig Iron.-The demand has been very languid since date of our last report, and, while prices are not quotably lower, there is no doubt of the fact that the market shows less firmness than it did a few weeks ago. Some people were of opinion that prices could not go lower, for the reason that many were barely clearing cost, while others were losing money on every ton of Iron sold. Prices are lower, notwithstanding all theories to the contrary, and they look like going still lower yet before there is any general reac-tion. The law of supply and demand cannot be ignored, so that under present conditions there is no great risk in predicting further weakening in prices before there is an improvement. The supply is not excessive by any means, but sellers cannot hold their trade unless by making concessions, which in a short time amount to a practical reduction all around. This, unfortunately, is the position to-day, and, in fact, there has been no single instance within the past six months when a seller would venture to ask for better terms than was accepted in the transaction immediately preceding. This, of course, is a very onesided business, but it will continue so long as there are more sellers than buyers. The chances are, therefore, that the market will continue weak until there is such a demand for the products of Pig Iron as will force consumers into the market. The theory that low prices creates a demand does not ac cord with facts. Low prices may and do curtail the supply, and in that way they prepare the way for an improving market. The Iron trade is passing through an experience of this kind; prices have been drooping, and the supply gradually de-creasing until at last there is little doubt that the decline has very nearly run its course. While there is nothing in the present condition of the Iron trade to warrant predictions of immediate improvement, it is probable on general principles that the abundant crops, the return of specie from Europe and a satisfactory termination of the elections will lead to an increasing demand, and ultimately to better prices. Meanwhile, business is slow and prices easy, if not lower. No. 1 Foundry is generally quoted at about \$20, Philadelphia, for good brands, but sales are in small lots; otherwise, shading to the extent of from 25¢ to 50¢ % ton is expected, and from that to \$1 \$7 ton on large lots. No. 2 Foundry is very dull, and nominally quoted at from \$18.50 to \$19. Mill Irons, under sharp competition for business, are a under sharp competition for business, are a shade easier, with sales of good brands at \$2.30; small lots, \$2.40, although there are prices ranging from \$17 to \$17.50, although rumors of considerably lower figures being prices ranging from \$17 to \$17.50, although \$18 is the nominal quotation. Sellers are anxious for business, and to good buyers are disposed to yield something in price providing good-sized orders can be had. Buyers are very cautious, however, and while a few thousand ton orders have been secured, the rule is to buy only for imme-

Foreign Iron.—There is no demand for large lots of anything. Special brands of Bessemer are being taken in lots of 200 to 300 tons each, but there is no demand from the large consumers. Spiegel is nominal at \$28 asked for 20 %; \$23.50 for 10 % to 12 %, and \$77 for 80 % Ferromanganese, with sales of the last named in 100-ton lots.

Blooms.-There is no change to notice either in price or demand, which is very languid. Asking prices are about as follows: Charcoal Blooms at \$53 @ \$55; Run-out Anthracite, \$43 @ \$45; Scrap Blooms, \$40 @ \$42; Northern Ore Blooms, \$38 @ \$40.

Muck Bars-The demand is very light and only small lots are taken, prices varying from \$29.50 to \$30, according to quality and location of mill.

Bar Iron.-Business has been very light during the week, and not quite up to what was expected. There is considerable inquiry at times, but no large lots are called for, so that the mills are running close on their orders and depending largely upon what may come in from day to day. Prices are unchanged, with 1.85¢ @ 1.9¢ as the range for Best Refined Bars and 1.7¢ @ 1.8¢ for Common and Medium grades.

Plate and Tank Iron.—The demand is less active than it has been for several weeks past, although the mills are comfortably supplied with orders for the present. It was hoped that the recent active demand for Plates would be followed by a corresponding and, having no money or credit, they can do improvement in other departments, but this has not been realized. On the contrary, things seem like settling down into the old rut, although the reaction may be only tem porary. In the meantime prices are a trifle easier, with the asking rates as follows: Plate Iron, 2.1¢; Tank, 2.15¢; Shell, 2.75¢ Flange, 3.75¢; Fire-Box, 4.25¢.

Structural Iron.-There has been no ss out of the usual routine demand for small lots, so that the position, as compared with last week, shows no change. Manufacturers are fairly well supplied with orders, although there is not the activity which was generally expected. There is more business in sight, however, so that there is no reason for expecting any material falling off in consumption, although there is some anxiety

is considerable shading done on large orders. The nominal rates are as follows: Angles, 2.1¢ @ 2.2¢; Bridge Plates, 2.25¢; T's, 2.75¢; Beams and Channels, 3.5¢, less the usual discount on large orders.

Sheet Iron.-There is no change worth eporting. The demand is fair and the eason's business up to an average. Prices show no improvement, and for small lots may be quoted as follows :

Best Refined, Nos. 26, 27 and 28. Best Refined, Nos. 18 to 25..... Best Refined, Nos. 18 to 25

Common, 1/4 less than the above.
Best Bloom Sheets, Nos. 22 to 25.
Best Bloom Sheets, Nos. 12 to 25.
Best Bloom Sheets, Nos. 16 to 21.
Common Red Plates, 8-16 to 16.
Blue Annealed
Best Bloom, Galvanized, discount.
Second quality, discount.
Common, discount.

Wrought-Iron Pipe.-This branch of trade continues dull, although more sales are reported, principally in small lots. Under a light demand prices rule weak, though nominally unchanged. Discounts as follows Butt-Welded Black Pipe, 30 %; Butt-Welded Galvanized, 20 %; Lap-Welded Black, 50 %; Galvanized, 35 %; Boiler Tubes, 4736 %

Steel Rails .- There is nothing of interest to report in this market. Small lots are called for somewhat frequently, but the aggregate amount is not important. Prices are nominally from \$20 to \$30 at mill, but good-sized orders can be placed on better erms. Sales have been made at \$28, if not less, but without making a firm offer it is almost impossible to say what price would be accepted. The outlook is not specially encouraging, although it seems very improbable that these figures will continue for any length of time, as some mills shut down when prices were \$2 or \$3 P ton higher.

Crop Ends .- There is more inquiry, with sales of 1000 tons "Barrow" at a figure equal to \$21, ex-ship, Philadelphia.

Old Rails .- Sales to the extent of about 5000 tons have been made during the week. Five thousand tons were taken in lots at an average price of \$18, in store, Philadelphia, and a 600-ton lot of Bull Heads at prices not named. Small lots of T's are held at from \$18.50 to \$19, with stocks in better shape than they have been for some time past, although buyers are by no means anxious. Prices are steadier, however, and with limited supplies holders are firm at the

Scrap Iren .- There is more doing and rices are steadier, with sales of Choice No. 1 at \$20.50 @ \$21; Machinery Scrap. \$14.50 @ \$15; Wrought Turnings, \$14.50 @ \$15, and Cast Turnings at \$9.50 @ \$10; Steel Scrap sold at \$20.50 for 200 tons, and Fish Plates at \$24 for a similar quantity.

Nails.-The demand continues fair for the season; prices, however, are weak and

It will be of interest to furnace managers to know that for the first time specially preprepared low-phosphorus roasted Ore, by the Taylor-Langdon process, is now offered for sale. Until now all such stock has been consumed by the companies producing it. (See announcement by J. Wesley Pullman on

Pittsburgh.

Office of The Iron Age, 77 Fourth Avenue, Privature, Pa., August 5, 1884.

There has been no material change in the general Iron situation since our last report there has certainly been no improvement and while in some respects the outlook is favorable, in others it is not. Production both of the raw material and the products is light, as both furnace and mill men are averse to "piling up" any more than they as well have been carying very light stocks of Finished for more than a year past. The crops are good throughout the country; farmers and country merchants are gener ally in good condition, and the indications are that there will be an improved demand for all kinds of manufactured goods within the next few weeks, although it is not likely that there will be any marked activity. The railroads generally report business as being dull and considerably short of what it was a year ago, and this has had a good deal to do with the falling off in the building of new roads as compared with former years. More over, this, in connection with the stringency in money matters, renders it very difficult for new corporations to place their bonds,

Iron Ore .- The Ore trade continues much the same as noted for some time past; ex-treme dullness is still the order of the day.

Pig Iron.—The depression noted for some time past continues, and while hopes are entertained of an early change for the better the outlook is not particularly encouraging. There is no disposition manifested by consumers to depart from the hand-to-mouth policy, nor can it be expected until it has been more fully demonstrated that the market has touched hard pan. Furnacemen generally are confident that the lowest point has been reached, and this is supported by the fact that at present prices only those furnaces favorably located and having all the latest improvements can make both ends meet. The most important features to note are the reduced production and

to secure business. Competition keeps the comparatively light stocks. A large promarket in a feverish condition, and, while prices are nominally are unchanged, there but in the Shenango and Mahoning is considerable shading done on large orders. blast are working on contract, so that there is but little accumulation going on It is admitted on all hands that stocks are light both in hands of producers and consumers, and the former are hopeful, in the event of an improved demand, of being able to establish an advance of 50¢ @ \$1 per ton. Good brands of metal may be quoted at \$15.50 @ \$15, cash; All-Ore do., \$17.50 @ \$18, 4 mos.; Foundry grades, \$17 @ \$20, cash, as to quality; Bessemer Iron, \$18.50 @ \$19, cash; Cold-blast Charcoal, \$27 @ \$28, cash.

Muck Bar.-There have been no sales reported recently, in the absence of which we continue to quote at \$29.50 @ \$30.50,

Manufactured Iron.—The best brands are still quoted on a basis of 1.65¢ @ 1.75¢ rates for Bars, according to character of order, delivery, &c.; "Old-Rail" iron, it is probable, can be had below the rates quoted; buyers generally prefer to pay the difference. probable, can be had below the rates quoted; buyers generally prefer to pay the difference. Those mills making a specialty of Bridge and Structural Iron are still pretty well employed, but the general Merchant Iron trade continues dull for the season. Skelp Iron has been sold as low as 1.75¢, and intimations are thrown out that it might be

Nails.-The Nail trade is reported dull and unsatisfactory, unusually so for the sea-son; in addition to a light demand prices are weak and irregular. Sales have been made during the past week at \$2.10, 60 days, 2 \$ during the past week at \$2.10, 00 days, 2 % off for cash, although some manufacturers assert that up to the present time they have made no sales under \$2.15. They are of the opinion, however, that round-lot buyers can obtain all they want at the first-named quotation. Manufacturers report that they are a good deal annoyed by small buyers who send in orders for a to 10 keers and expect send in orders for 5 to 10 kegs and expect to buy at the same rate with the jobber who orders by the carload. There is always a discrimination between the wholesaler and

Wrought-Iron Pipe.—The Pipe trade continues dull for the season, but it is hoped and expected that there will be a change for the better later on. No change in prices. Discounts on Black Butt-Welded Pipe, 30 %; on Galvanized do., 20 %; on Rlack Lap-Welded Pipe, 50 %; on Galvanized do., 35 %. For Selected Pipe, or Pipe cut to specified lengths, the discount is 5 % less than the rates

Steel .- There is very little to note in regard to this important interest; trade only fair, while prices remain unchanged. Best brands of Refined Cast Steel, 914 @ 912 ; do. Crucible Machinery, 5\$ @ 514 \$; Open-Hearth and Bessemer Machinery, 3\$ @ 314 \$.

Steel Rails.—We are reported a sale of some 5000 tons, deliverable in Chicago, at equal to \$28, net cash, at works here. The feeling obtains that the market has struck bottom, and that buyers will incur but little risk in contracting at the price. A number of mills have shut down, refusing to sell at present rates, and with production reduced the market may take a turn upward some of these days unexpectedly.

Old Rails.-We can report a sale of 500 tons at \$21, and a lot of 100 tons at \$21.75. Sometimes a small lot for immediate delivery commands an outside price, as in some cases time is an important consideration.

Railway Track Supplies.—Prices are still quoted the same as for some time past, but a desirable order could, no doubt, be placed below the prices named. Spikes, 2.35¢, 30 days; Splice Bars, 1.65¢ @ 1.75¢; Track Bolts, 2½¢ @ 2¼¢.

Crop Ends—American are still quoted at \$18.50 @ \$19.50, and Bloom Ends, 50¢ @ \$1 ₩ ton less.

Scrap.-There is but little doing, and prices are little better than nominal. No. 1
Wrought Scrap, \$19 @ \$20 P ton; Old Car
Axles, \$27 @ 28; Wrought Turnings, \$16 @
\$17; Cast Borings, \$12 @ \$13 P gross ton;
Old Car Wheels, \$17 @ \$18, gross ton.

Chicago.

Office of The Iron Age, 36 and 38 Clark St., & Cor. Lake St., Chicago, Aug. 4, 1884.

Hardware.-The week under review shows few points of interest. Being the closing week of the month, trade, if anything, was a trifle slower than the previous one. The demand is necessarily light and varied, embracing nearly the whole line of Hardware. Blacksmith and Sheet Iron goods have been slightly in the supremacy. The present month promises an improve-ment in trade generally, and opens with numerous inquiries for prices and catalogues of specialties. Buyers are cautious and will not be likely to load up very heavily at the start. Everything points to a good fall trade. Collections are fairly good, though oney does not seem to be in abundance.

Barb Wire .- Calls for Barb Wire are on Barb Wire.—Calls for Barb Wire are on the increase. Trade is principally from the Southwestern territory as yet, but prospects indicate that before the month closes the demand will be largely improved from nearby trade. Manufacturers are talking comnation prices, but no action has been taken. Quotations are 41/4 for Painted, and 51/4 for Galvanized.

2%, 60 days, with reported sales at \$2.25. For less quantity \$2.35 is pretty uniform, and some of the leading houses insist that they get these figures, while others are not firm and would be likely to sell for less. %, 60 days, with reported sales at \$2.25.

demand, and propose thus to continue.
They are confident that the condition of stocks and the encouraging prospect of business in a general way will bring relief before a great while, though the market as yet gives no substantial encouragement. Manu-facturers of various kinds come into the market with the expectation of discounting prices, but, failing in the attempt, withdraw, and, if necessary, order a carload or two to keep them running until they are fully per suaded that they can do no better.
There are others, however, who have courage enough to place orders. During the week one concern placed an order for 10,000 tons, to be delivered within six to nine months, while some other orders, ranging from 100 to 1000 tons, have been practically disposed of. In St. Louis there is considerable apathy in trade. The suspension of the St. Louis Iron Ore and suepension of the St. Louis from Ore and Steel Company leaves about 15,000 tons of Pig that will seek a market. Much of the stock is held by banks, and at present there is an uncertainty as to what will be done with it. An effort is being made to prevent it from coming on the market at a reduced price, but so long as it is unsold there will be a silent watch which will keep the market in a feverish state. Bessemer Pig is quoted by a St. Louis house at \$13.75, cash, Chicago delivery. Everything, so far as can be learned, points to an encouraging outlook for fall trade in this market. Confidence is slowly, being established among consumers. Furnace men are firm in their demands, and Irons are not accumulating at the present rate of production. With this background there is room for a bright picture of the future, and it is generally accepted that it will be realized. For carload lots, four months, we quote as follows: Lake Superior Charcoal, Nos. 1, 2 and 3, at \$21.50 @ \$22; price, but so long as it is unsold there will months, we quote as follows: Lake Superior Charcoal, Nos. 1, 2 and 3, at \$21.50 @ \$22; Nos. 4, 5, and 6 at \$23; Lake Superior Coke at \$21; Lake Superior and Ohio, mixed, at \$20 @ \$21; Ohio Standard Black Band, No. 1, \$21 @ \$22; Southern, No. 1, at \$19.50, and No. 2 at \$18.50; Silvery Soft at \$18.50 @ \$20 50; Anthracite, No. 1, at \$22, and No. 2 at \$21.

Scotch Plg.—Nothing new to report on Foreign Iron. Market quiet and prices same as last week: Summerlee, \$25.50, cash, from yard, and \$24.50 to arrive; Glengarnock, \$27 from yard, and \$24 to arrive.

from yard, and \$24 to arrive.

Merchant Steel.—Our remarks of last week would be entirely applicable to the week just closed. The market continues very quiet and irregular. There is little or no disposition on the part of even those who must buy to place orders for anything not actually necessary at the moment. There is really no demand except in a small jobbing way, and this does not amount to much when all told. Syndicate Steels are unsettled at nominally 7½¢. Manufacturers who use large quantities of Steel talk of the good prospects and predict largely-increased deprospects and predict largely-increased demand for their products during the next season, but are not buying material to any extent for their manufactures. Some of the Reaper men are making inquiries, but at this writing have not closed any contracts. We quote as follows for Best Refined grades from store :

Best Refined Cast Tool Steel. Crucible Cast Machinery Steel. Open-Hearth Machinery Steel. Bessemer Machinery Steel. Open-Hearth Spring Steel. Toe-Calk Steel. Bessemer Steel.

Steel Rails.—The Steel Rail market is quiet and weak. Mills are asking, as heretofore, \$35 @ \$37 for prompt delivery, but on their future business prices are less stringent. We learn of proposals made by somebody to deliver Rails during the last three months of the year at about \$32.50 for No. 1's, without getting the order, and we are yet in doubt whether this price has not been discounted. While all agree that there is no money in Rails at \$30, there seems to be a quiet hunt, nevertheless, for contracts at figures not far above. It is difficult to learn the full condition of the market at present.

Old Rails.—We have not learned of any sales during the week. The last quotation was \$19.50, at which several small lots changed hands. Speculators are asking \$20 @ \$20.50, without finding takers at any price.

Structural Iron. -The market is in ab the same position as a week ago. A fair trade is doing from store for ordinary purposes, and mills are running pretty full at present on special contract sizes. Some new business in still in sight, and in all possibility will be placed within a week or all possibility will be placed within a week or 10 days. 'We continue to quote combination prices, on which there is some change in discount that we have not been able to obtain, but which savors of a lower figure, on account of close competition on recent orders. Quotations with 1/4 @ 1/2 added for delivery from stock Beams, \$3.60; Channels, \$3.60; T Iron, \$3 Angle Iron, \$2.50; Flitch Plates, \$2.50 Frieze Plates, \$2.70.

Norway Bars.—Some increase in the demand for Imported Bars was noticed a week ago, but no material change has occurred since then. Merchant trade is supplied at 3.9%, and consumption at 4¢ rates

Galvanized Iron.-Since last week's report a slight change has been noticeable in favor of increased trade. The month was more than usually dull, but the prospect for August is considered good. Buyers of considerable importance are again in the market—prices having been confirmed—and in for Galvanized.

Nalls.—The demand for Nails does not seem to vary very much. Business is confirmed to small lots, which in the aggregate make a business beyond what would be expected when the conditions of the market are considered. Carload buyers have no faith in prices, and only order in quantity when they can secure advantage sufficient to cover the possible decline of a week or 10 days. For carload lots we again quote \$2.36, 2 6 of days, with reported sales at \$2.25.

Bar Iren .- Bar Iron moves along fairly. The demand for New Puddled Iron continues with marked regularity. Business has been much above the average of former years for the month of July, and August firm and would be likely to sell for less.

American Pig Iron.—The Pig Iron warket is in that position where there is nothing to do but wait. Furnacemen are firmly sustaining their price against a slow than take the risk of a much greater ad-

vance before the season of 1884 closes. thing that has helped trade in this class of Iron was the firmness with which prices were sustained at the critical moment. Now consumers are satisfied that they can do no better, and no longer hesitate to contract for any supply that they are certain to want. For New Puddled Best Refined we quote 1.9¢ @ 2¢, and note less concessions weekly. For Common Iron, 1.7¢ @ 1.8¢ are the ruling quotations, while sales are made at figures which differ very much in buyers' favor. Upon all such sales, however, special reasons are assigned. reasons are assigned.

Black Sheets .- The movement of Black Sheets is gradually increasing, and, from present appearance, will during the month develop into a fair trade. So far sales have been chiefly confined to the small jobber in Stoves and Pipe and articles of small manufacture. Heavy buyers are making vigorous efforts to influence the market in their favor, but makers are pretty stiff and determined to get a better price if it is to be had. We renew our qotations from store: Nos. 10 to 14 at \$2.60 @ \$2.70; No. 24 at \$3; Nos. 25 and 26 at \$3.10, and No. 27 at \$3.20, from store.

Old Wheels .- There is so little demand for Old Wheels that we cannot give more than a nominal quotation. Foundries are offering \$18, but no transactions are reported

Scrap Iron. -The market continues over stocked and prices necessarily weak. Mills continue to offer \$17 for No. 1 and \$12 for No. 2, but are grading exceedingly close. We make the following quo \$12 for No. 2, ingly close. We make the following quatations as dealers' purchasing prices: No 1 Wrought Scrap, \$\mathbb{H}\$ net ton, \$16; Cast Scrap, \$\mathbb{H}\$ net ton, \$13; No. 1 Stove Plate Scrap, \$\mathbb{H}\$ net ton, \$\mathbb{H}\$ or, \$9; net ton, \$13; No. 1 Stove Plate Scrap, Renet ton, \$8; Wrought Turnings, Reton, \$9; Cast-Iron Borings, \$7; Old Plow Steel, \$9; Tool Steel, \$\mathbb{P}\$ ton, \$17; Steel Tire, \$\mathbb{P}\$ net ton, \$14.50; Buggy Springs, \$\mathbb{P}\$ net ton, \$16; Malleable Scrap, \$5.

Chattanooga.

Office of The Iron Age, Carter and Ninth Sts., CHATTANOOGA, August 4, 1884.

General trade is slightly improved. There is more confidence in the general tone. Stocks of all kinds are flat down to the absolute necessities of dealers and producers. Several large building enterprises held in abeyance since early spring are again taking form, and most of them will materialize during the late summer and fall. Lumber is somewhat stiffer, though not im-proved in price. Contractors in all lines report a better outlook. The weather is cooler. Crops are in most prosperous condi-tion. Provisions are cheap, favoring work-men whose wages have been reduced. Labor is very fully employed.

Pig Iron. - The lowness of stocks tends to strengthen business, though prices have not improved. Founders report a considerable number of orders for building and other castings ranging from 50 to 200 tons, and the metal is bought at current quotations to fill the contracts. A good many of our fur-naces are holding Iron on account of the re-ported shaky condition of some large deal-ers who offer to take big bills. We note ers who offer to take big bills. We note sales of round lots of No. 1 Foundry at \$16, cash, at furnace; other grades run from \$13 to 15. We quote small lots, 60 days: No. 1 Foundry, \$17 @ \$18; No 2 Foundry, \$16.50; Gray Forge, \$14 @ \$15; White and Mottled, \$13 @ \$14; Car-Wheel Metal, \$22

Ores.—We quote Fossiliferous Ores, averaging about 50 % Metallic Iron, \$1.75 ? ton, delivered at river landings; higher qualities, \$2. Brown Hematite, \$2 @ \$2.25 on cars at

Miscellaneous Articles.—Old Rails, \$16; Wrought Scraps, \$11 @ \$14; Old Wheels, \$16; Cotton Tie Clippings, \$10. Business in this list is extremely light, and most of the articles may be set down as

Merchant Iron.—Bar is dull at \$1.70 for car lots; Spikes, \$2.35; Bolts, \$2.75 @ \$3;

Barb Wire.—Four-Point and Cambria Link, Galvanized, 6¢ & B.

Coal.—We quote Fancy Lump at \$3; Common, \$2.50; run of mine to manufactur-ers, \$1.50 @ \$1.75 at mills.

Coke.—We quote at \$2.12 @ \$2.30 at furnace; Foundry Coke at 8¢ @ 10¢ & bushel.

Cincinnati.

AUGUST 2, 1884.—Pig Iron.—Transactions are confined to immediate wants, which are small. While some makers are inclined to force sales, others hold prices firm, expresswillingness to trust to future developments. The carefully present ments. The carefully prepared statistics show production to be in excess of consump-tion for June and July. Quotations for the

| Hanging Rock Charcoal Foundry, No. 1 | |
|---|---------------|
| No. 1 | \$22.00 @ |
| NO. 7 | 21.00 @ |
| Others, from \$1 to \$2 less. | |
| Hanging Rock Coke Foundry | 18.00 () 19.9 |
| Virginia, Tennessee and Alabama, | |
| 50¢ @ \$1 leas. | |
| Hanging Rock American Scotch, | |
| No. 1 | 19.25 @ |
| No. 2 | 17.75 6 |
| Hanging Rock Silver-Gray Soften- | |
| ers, No. 1 | 10.25 @ |
| No. 9 | 17.73 @ |
| Others, \$1 @ \$1.50 lens. | |
| No sales of Car-Wheel or Forge | reported. |

Louisville

GEO. H. HULL & Co., Commission Merchants, report to us as follows, under date of August 2, 1884: The market shows no animation. Sales are light and confined to quantities required for immediate consumption. The amount of Iron being consumed is rather above the average for this time of year. Some of the foundries are working. year. Some of the foundries are donain full. We quote, for cash, in round lots, as

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ng as

| Hanging Rock Charcoal, No. 1, Foundry | 22.00 @ 28.00 | Southern Charcoal, No. 1, Foundry | 18.00 @ 19.00 | Silver Gray, different grades | 15.00 @ 17.00 | Southern Coke, No. 1 Mill, Neutral | 15.00 @ 15.50 | No. 2 " " 14.00 @ 15.50 | Southern Charcoal, No. 1 Mill | 16.00 @ 14.50 @ 18.00 @ 14.00 | White and Mottled, different grades | 18.00 @ 14.00 | Southern Car-Wheel, standard brands | 18.00 @ 14.00 | Southern Car-Wheel, other brands | 26.00 @ 26.50 | Southern Car-Wheel, other brands | 26.00 @

Warm-blast...... \$1.00 \$23.00

W. B. BELENAP & Co., Iron and Steel
Merchants, Nos. 115 to 121 West Main street,
Louisville, under date of August 2, 1884,
report as follows: The improvement in
general trade mentioned last week has
shown up a little stronger this week. Harvesting of the crops has progressed finely,
and those still growing have enjoyed all the
encouragement that most propitious skies
could give. A widely extended rain has
averted the drought, which at one time
threatened the whole Upper Ohio Valley,
and navigation has been resumed from Pittsburgh down. The feeling in trade circles
over the change has been well reflected in over the change has been well reflected in the New York stock market. The apprethe New York stock market. The appreciation of values there attests a return of confidence, which alone is needed to make the desert blossom as the rose. Bar Iron.—A better demand, in a small way, is plainly discernible—not enough, however, to call for heavy stocks yet awhile, but certainly enough to put a stop to complaint at market prices. Short Heavy groups are firmly enough to put a stop to complaint at market prices. Sheet.—Heavy gauges are firmly held; indeed, they are \$1 @ \$2 \$\partial \text{ton above} the lowest figure touched this year. Light gauges are still dull, and stick at bottom. Scrop is plentiful. Considerable sales have been made to the rolling mills at New Albany at \$5\psi\$ for No. I Selected Wrought, delivered. The Rail freight from New Orleans is at present specially favorable to its delivery, viz., 17\psi\$ 100 pounds. Nails are jobbing in round lots. The policy of restriction on the part of the mills in closing down a large part of the time is beginning restriction on the part of the mills in closing down a large part of the time is beginning to tell in greater confidence in price. The amount of business going on everywhere contributes largely to their consumption; at the same time, the adoption of Wire fences has cut off the use of Heavy Fence Nails largely. One Wire Staple takes the place of half a dozen Fence Nails, and does not weigh as much as a single one.

We have received from the Stanley Works a small case of sample papers of their Tacks, now on the market. The choice of colors for labels and the distinctions made thereby of the different kinds is particularly to be commended. We have always contended with manufacturers that goods of a certain

commended. We have always contended with manufacturers that goods of a certain line, where similarity of package was likely to confuse, should be so branded or labeled that the eye would detect at once what was wanted, without the laborious process of reading each word. A keg of Burden Horse Shoes, for example, should have an entirely different stencil from one of Mule Shoes. A box of No. 3 Putnam Nails should be stensibled in a different ink than one of No. 7. Ptlm., i Nails, i Ag.imp Mf. iroi Pump. Dutel ciled in a different ink than one of No. 7, and so on. An error in piling for stock or in getting out an order is at once discovered. Blood's Hatchets are labeled on this plan, viz.—a scarlet label for shingling, a purple for lathing, a blue for claw. The trade can have but one wish on this head, and that one we have outlined above.

Imports and Exports. IMPORTS.

The following were the Imports of Hard-are Iron, Steel and Metals into the Port of

| ware Iron, Steel and M | fetals into the Port of |
|---|---|
| New York for the w | eek ending August 5, |
| 1884: | |
| Bardware, | Coddington T. B. & Co. Sheet, bdls., 290 Crocker Bros. Pig. tons, 372 Spiegel, tons, 352 |
| Arthur H. & Co. Box, 1 | Crocker Bros. Pig. tons. 372 |
| Box, 1 Blake Theo. A. Machinery, pkgs., 3 | Dolce A. |
| Machinery, pkgs., 8 Best John P. & Co. Gun barrels, cs., 16 | Dolge A. Wire, cks., 2 Heidelback & Co. |
| Gun barrels, cs., 10 Riumenthal B. & Co. | Ore, tons, 715 |
| Blumenthal B. & Co. Case, 1 Boker Hermann & Co. | Inman S. S. Co |
| Hdw., cutlery and guns, pkgs., 52 | Wire netting, rolls, a Naylor & Co. Pig, tons, 200 |
| guns, pkgs., 52 Dogener R. & C. Co. Machinery, cs., 3 Dermond, Chas. Arms, cs., 16 Drexel, Morgan & Co. | Spiegel, tons, 1625 |
| Machinery, Cs., 3 Dermond, Chas. | Sheets, bdls., 228 |
| Arms, cs., 16 | Stetson Geo. W. & Co. |
| | Spiegel, tons, 1625 Pierson & Co. Sheets, bdls., 228 Stetson Geo. W. & Co. Pig, tons, 150 Tillottson L. G. & Co. Mdsc., cs., 10 |
| Wield Alfred & Co. | Mdse., cs., 10 Williamson Jac. & Co. |
| Mdse., cs., 6 Foulke & Co. Anchors, 2 | Williamson Jas. & Co. Pig tons, 300 |
| Anchors, 2 | |
| Chain, fathoms, 165 Fuchs & Lang, Machinery, pkgs., 18 | Pig, tons, 100 Scrap, tons, 300 Wire rods, coils., 300 Wire rods, bdls., 460 Rods, bdls., 10,555 |
| Machinery, pkgs., 18 Frasse & Co. | Wire rods, coils., 800 Wire rods, bdls., 460 |
| Mdse., cs., 4 Gerdan Otto, | Rods, bdls., 10,555 |
| Gerdan Otto, | Greet. |
| Mdse., cs., 3 Graef Cutlery Co. | Abbott, Jere & Co. |
| ('ntlery, cs., 8 Hartley & Graham, Guns, cs., 8 | Cases, 37 Bock & Duncan, Flat wire coils, 358 Brown Vernon H. & Co. |
| Guns, cs., 8 | Brown Vernon H. & Co. |
| Chains, cks., 12 | Bundles, 9 |
| Hildick A. H. Chains, cks., 12 Inman S. S. Co. | Bundles, 9 Cary & Moen, Bundles in colls, 64 Friedman A. & Co. |
| Machinery, pkgs., 4 Nails, kegs., 21 Kernkamp Freres, Arms, cs., 38 Machinery, cs., 5 | Friedman A. & Co. |
| Kernkamp Freres. | Circular saw, 1 Jacks, Wm. Strips, bdls., 90 Moss F. W. |
| Machinery, cs., 5 | Strips, bdls., 90 |
| Markt & Co. Mdse., cs., 21 Moore's Sons J. P. | DUBGIOS, 2500 |
| Moore's Sons J. P. | Bars, 32 Cases, 2 |
| Guns, chr. 9 | Naylor & Co. Pieces, 354 |
| Guns, cks., 2 Moss F. W. | Pieces, 354 Wire rods, tons, 332 |
| Moss F. W. Files, cks., 8 Nash David, | Billets, pcs., 182 Flat rods, 8006 |
| | |
| Machinery, cs., 18 | Cross ends, tons, 50 |
| Schoverling, Daly & | Cross ends, tons, 59 Temple & Lockwood, Packages, 12 Wagner W. F. Bundles, 114 Barr. 8 |
| | Wagner W. F. |
| Mdse., cs., 14 Taylor Thos. Mdse., cs., 8 | DIM Dy O |
| | Cases, 21 Plates, 14 |
| Mdse., cs., 15 Ward Asline, Mdse., cs., 5 Wiebusch, Hilger & Co. Chains, cls., 14 Mdse., cs., 37 Casks, 8 | Order, |
| Mdse., cs., 5 | Bands, 40 Bars, 27 |
| Wiebusch, Hilger & Co. | Cast car-wheel tires |
| Mdse., cs., 87 | 27 Rails, 814 |
| | Rails, 614 Casks, 18 Cases, 16 Bundles, 8 |
| Arms, cs., 19 | Cases, 16 Bundles, 8 |
| Arms, cs., 19 Jewsharps, cask, 1 Woodhouse & Rudu, | Metals. |
| Machinery, pags., 10 | Baring Space & Co. |
| Order. | Tin plates, hxs., 555 Berokheimer E. Stencil plates, cs., 15 Bruce & Cook, Tin and black plates |
| Arms, cs., 18 Case, 1 Cask, 1 | Stencil plates, es., 1 |
| Cask, 1 Machinery, cs., 2 | Bruce & Cook, |
| Machinery, cs., 2 Files, cks., 9 | bxs., 109 |
| Iron. | bxs., 109 Cort N. L. & Co. Tin plates, bxs., 250 Crooks Robert & Co. Tin plates, bxs., 628 Diskerson, Van Dusen & |
| Baring Bros. & Co. | Crooks Robert & Co. |
| Baring Bros. & Co. Wire rope, colls, 4587 | Dickerson, Van Dussn & |

| | Tin plates, bxs., 1244 | |
|----|--|----------------------|
| 1 | Drexel, Morgan & Co. Tin plates, bxs., 5815 | Tin plates, bxs. |
| 1 | Fraser Jas. | Reid John. |
| 5 | Type metal, ingots, | Baths, sinks, &c. |
| í | 380 | pkgs., 104 |
|) | Inman S. S. Co. | Richardson W. S. |
|) | Zinc nails, bags, 4 | Old copper, pkgs., |
| 3 | Jex Wm. & Co. | Wilson John & Son, |
| | Old brass, tes., 3 | Zinc, pkgs., 28 |
|) | Linden Henri Van der, | Order, |
|) | Rolled zinc, cks., 7 | Tin plates, bxs., |
|) | Mill H. R. de & Co. | 10,299 |
|) | Tin plates, bxs., 108 | Lead, pigs, 1116 |
| ı | Naylor & Co. | Tin, slabs, 2599 |
| ٠, | Tin, bxs., 766 | Zinc, cks., 92 |
| 1 | Tin sheets, cs., 90 | Tin and terne plates |
| | Tin plates, bxs., 3226 | bxs., 1126 |
| ı | New Haven Clock Co. | Tin plates and tag |
| | Mdse., cs., 10 | gers, bxs., 1450 |
| | Importations of Cu Metals for the week | ntlery, Hardware and |

| | importations of Childry, | | |
|-----|----------------------------|-----------|---------|
| | Metals for the week ending | August | I were |
| B | as follows: | | |
| 8 | | Quantity. | Value. |
| | Anvils | 105 | 515 |
| В | Brass goods | 74 | 6,581 |
| В | Bronzes | 8:8 | 1.952 |
| | Chains and anchors | 29 | 1,165 |
| 9 | Clocks | 69 | 7,042 |
| - | Copper | | 608 |
| 8 | Copper ore | 16 | 27 |
| 1 | Cutlery. | 113 | 37,769 |
| • | Gas fixtures | 1 | 498 |
| | Guns | 838 | 46,801 |
| £ | Hardware | 8 | 141 |
| В | Iron, pig, tons | 8,000 | 77,157 |
| | Iron, sheet, tons | 58 | 2,267 |
| | Iron, other, tons | 665 | 29,289 |
| 7 | Lead, pigs | 880 | 294 |
| P | Machinery | 26 | 1,380 |
| , | Metal goods | 280 | 31,840 |
| | Needles | 27 | 8,164 |
| t | Nickel | 12 | 5,969 |
| 7 | Old metal | | 1,201 |
| 9 | Platina | 1 | 897 |
| | Platedware | 10 | 948 |
| t | Plumbago | 1,508 | 15,972 |
| | Percussion caps | 50 | 5,012 |
| 9 | Pins | 6 | 1,164 |
| | Saddlery | 8 | 1,896 |
| 7 | | 57,956 | 66,883 |
| . 1 | Steel pens | 8 | 5,206 |
| | Silver ore | 4 | 100 |
| 1 | | 50,600 | 214,180 |
|) | Tin, slabs, 5,882 lbs | 24,465 | 100,119 |
| 2 | Wire | 33 | 2,118 |
| r | Zinc oxide | 70 | 707 |

The comparison with previous dates is as

| | For the | 31 weeks | Same |
|-------------------|---------|------------|------------|
| | week. | of 1884. | time 1888. |
| Cutlery, pkgs | 113 | 8,038 | 4,488 |
| Hardware, pkgs | 8 | 492 | 642 |
| Iron, R. R., bars | | 9,422 | 76,800 |
| Lead, pigs | | 21,062 | 18,675 |
| Steel, pkgs | | 1,114,585 | 1,217,865 |
| Tin, bxs | | 1,142,888 | 1,384,279 |
| Tin siabs, lbs | 524,465 | 11,094,884 | 10,347,172 |

EXPORTS.

The following were the Exports of Hardware, Iron, Machinery, Metals, &c., from the Port of New York, for the week ending Augus Dutch

| st 5, 1884: | |
|--|--|
| West Indies. | British Guiana |
| Quan. Val. gals1400 \$167 bxs 5 24 | Ptlm., gals5000 588 |
| | British Australia. |
| p.,pkgs. 3 47 n,pkgs. 3 20 | Hdw., pkgs 588 8,098 |
| 1 45 | Mf. iron, pkgs 70 1,518 |
| East Indies. | Scales, cs 17 175 |
| | Pumps, pkgs. 74 2,607 |
| gals.726,250 72,300 | Air guns, cs 9 356 |
| Bremen. | Nails, cs 8 99 |
| gals. 756,065 59,500 | Cutlery, case. 1 81 |
| n, pkge 42 1,272 | Wire g'ds,pgs. 8 51 |
| nach. cs. 21 640 | Mach'y, pkgs. 15 1,580 Ag.imp., pkgs 59 433 |
| ers. cs 10 210 | Ag.imp., pkgs 59 433 Axles, cs 16 449 |
| p., pkgs 2 40 | Clocks, pkgs. 59 1,516 |
| Hamburg. | W. mills, cs 2 200 |
| p., pkgs 12 888 | Tacks, cs 2 110 |
| case 1 98 | Weld'g comp., |
| pkgs 159 2,959 | case 1 12 |
| press, | Sew. ma., cs 89 3,900 |
| 1 1,990 | Ptlm. gals .41,280 4,963 |
| A. CS. 418 4,786 | Gongs, case 1 150 |
| y, pkgs. 10 8,285 | New Brunswick. |
| cs 11 1,848 | Saw mill 1 1,600 |
| , pkgs 40 642 | British East Indies. |
| p'r, cks. 5 1,662 pigs 18 500 | |
| ope,pgs 4 90 | Ptlm.,gls 1,722,550 167,968 |
| n, pkgs 5 197 | British West Indies. |
| gais.849,939 27,039 | Mf. iron, pkgs 86 867 |
| па., он., 5 560 | Ptlm., gals22,998 2,526 |
| Stockholm. | Nails, kegs 69 243 |
| gals.140,900 12,800 | Clocks, pkgs. 5 68 |
| | Mach'y, pkgs. 3 840 |
| Dantsic. | Hdw., pkgs 49 1,175 Firew ks, case 1 99 |
| gals.369,447 29,900 | Ag. imp.,pkgs 17 296 |
| (olberg. | Scales, pkgs 8 108 |
| gals.108,928 8,800 | Saws, case 1 9 |
| | Nails, bxs 2 9 |
| Stettin. | Sew. ma., cs 15 167 |
| gals.329,783 30,745 | Cutlery, pkgs. 3 63 |
| hristiania | Cartridges, cs. 4 56 |
| gals.123,420 12,100 | M. dust, bbis. 12 16 |
| totterdam. | Yel. met'l., cs. 2 129 |
| | Nova Bootia. |
| na., cs 306 7,600 | Hdw., cs |

Ptlm., Ptlm.

Ptim.

Ptlm. Ptlm., 10 5 5 28 10 Antwerp. Ptlm., gals. 352,642 27,609
Sew. ma., case 1 27
Hdw., cs. . . . 9 175
Mach'y, pkge. 1 250
Mf. iron, pkgs 3 425
Firearms, cs. . 2 111 London

Mf. iron, pkgs Perte Rico.

Mf. iron, pkgs. 65
Clocks, case. 1
Nails, kegs. 128
Ag. imp. pkgs 9
Rifles, case. 1
Cuttlery, cs. 2
Ptlm., gals. 13,700
Hdw., pkgs. 17
Saws. cs. 4
Tacks, case. 1 Hull. Ag. imp., pkgs 88 Hdw., cs.... 86 S. rollers, cs... 4 Clocks, pkgs... 187 Britannia w're, Belfast. Ptlm., gals.835,979 81,600 Liverpool. Hdw., pkgs... 24 Clocks, pkgs.. 88 1,478 Clocks, pkgs. 2 Mf. iron, pkgs 1 Haytt. 4,481

Spanish Possessions in Af. ica. Mach'y, pkgs. 41 Nails, cs..... Hdw., pkgs... 22 Clocks, pkgs... 6 Nails, case... 1 Cir. tr'ks, pgs. 10 Mf. iron, pkgs. 8 Sew ma., cs... 4 Scales, case... 1 Shot, bags... 2 Ptim., gais... 2495 Nails, kegs... 58 iron safcs... 2 Purup... 1 Nails, cs..... Iron ore, case. Steel, case... Water wheel.. Saws, cs..... Pistois, case. Stamp'd ware, Sew. ma., cs. 68 1,008 Nickel, cs. 68 19,506 Ag. imp.pkgs 19 506 1 C. matte, sks. 2908 27,500 P. Wire g'ds, cse 1 30 Brass gda., pgs 8 1,124 Nalls, cause. 1 50 Water closets, crates..... Pump . Catte. Ptlm., gals. 608,812 41,477 Marseitles Ptlm., gals.289,026 21,677 Bristol. Bilbae. Ptlm., gals.370,839 30,651 Ag.imp.,pkgs. 300 3,000 Ore, pkgs. . . 78 775 Nails, bxs. . . . 8 166 Ptlm., gals. .65,420 5,600

Glasgow.

Tin and terme plates, hrs., 1516

Quan. Val.
Mf. iron,pkgs. 213 1,177
Mach'y, pkgs. 4 70
Ptlm., gals. 120,000 18,700
Irons, cs. . . . 100 490
Loc. mat pkgs 2 1,150
Ag.imp., pkgs 23 210 Scales, cs.... Arms, cs.... Steel, mf. of, Ag. imp., pkgs Jack screws, Jack screws, pkgs. 6 98
Mach'y, pkgs. 63 4,801
Mf. tron, pkgs. 811 1,516
Loc. matl. cs. 3 283
Cutlery, pkgs. 86 2,384
Nails, kegs. 129 412
Tacks, cs. . . 6 208
Cartridges, cs. . 11 641
Clocks, pkgs. 6 290
Pt , gals. 24,800 2,640
Tubes, cs. . 5 300
Cable tramway, pkgs. 8 515 Pozsuoli. Ptlm., gals. 179,084 18,879 Chill. Ptlm, gals. .68,000 Cartridges, cs 4 Organ 1 Clocks, cs. . . . 29

Tarragona. Ptlm., gals. 175,210 15,098 Japan. Corunna. Hdw., cs... Ptlm., gals.227,090 19,803 Nails, keg..... 1 Argentine Republic. Alexandria Ouba.

Ptlm., gals.198,000 17,325 Mach'y, pkgs. 2 178

Mf. iron, pkgs. 354 2,801
Locomotive . 1 6,000
Iron safes . 6 200
Ag.imp., pkgs. 3 92
Ptlm., gals., 53,888 5,654
Pumps, pkgs. 4 193
Saw . 1 77
Valves, case. 1 63
Sew ma., cse. 1 25
Saw mill. 1 1,799
Tubes . 38 208
Hdw., pkgs. 38 575
Nalls, kegs. 525 1,339
Brass g'ds. cs. 2 235
Sales, pkgs. 13 190
Brass g'ds. cs. 2 235
Sakes, pkgs. 13 20
Kales, pkgs. 14 20
Kales, pkgs. 1 D. pkgs 3
gals. 28,886 5,654
s. pkgs. 4 193
... 1 77
ss, case 1 63
ana., cse 1 25
mill. 1 1,799
ss 38 306
f., pkgs 38 576
s. kegs. 525 1,339
lies, pkgs. 13 100
ss gds. cs. 2 235
sks. box. 1 5
lkes, legs. 102 303
dust, bbls. 30 27
r springs, cse 1 30
alls, pkgs. 114 496
teel, pkge. 1 90
leel, pkge. 1 90
lees, pkgs. 13 400
swe gds. cs. 2 216
leel, pkge. 1 90
lees, pkgs. 13 400
lees, legs. 102 303
alls, pkgs. 114 496
leel, pkge. 1 90
leel, pkge. 1 90
lees, pkgs. 13 400
lees, legs. 102 303
leel, pkgs. 27
leel, pkge. 3 61
leel, pkgs. 3 61
leel, pkgs

(From Our Own Correspondent.)

WASHINGTON, D. C., August 5, 1884. The meeting of the select committee of the The meeting of the select committee of the House of Representatives on the inquiry into the steel production of the United States, the manufacture of guns of high power, and armor plates, and the selection of the best site for the establishment of a national foundry, was held in the private office of the Secretary of War, in the War Department, on last Thurday (July 31). Those of the committee present were Mr. Randall, of Pennsylvania, the chairman, and Representatives Hiscock, of New York, and Reed, of Maine. Of the other members of the com-Maine. Of the other members of the committee, Mr. Hewitt has sailed for Europe, and Mr. Burnes, of Missouri, was detained at home. The gentlemen named, however, will go on with the work, obtain the required information and maketheir report.

The meeting of last Thursday laid out the work proposed, which, as a beginning, included a visit to the tool establishment of William Sellers, of Philadelphia, on Friday, and the Navy Yard at Washington later in the season. A letter was also submitted from General Hawley inviting the House Committee to meet the Senate Committee in New York, August 5 (to-day), which it was agreed to do. The committee propose then to visit the Cold Spring Foundry, on the Hudson; the Park establishment, in Pittsburgh, and the South Boston Iron Company, and Paulding, Kimberly & Co. Their further movements will be governed by the suggestions brought out in these preliminary inquiries. PROGRAMME OF THE COMMITTEE. inquiries.

French West Indies.

Pilm. gals... 2000 200
Ag. imp. pige 1 19

Research the character of machinery and appliances generally necessary to the manufacture of the larger guns. The plant required for this tin Africa.

Ptim., gals. 149,550 14,581 purpose, he said, would cost not less than \$150,000 and that was too much to expect private individuals to invest for a classical state. work strictly in the interests of the Gov-ernment. Mr. Randall added that later ernment. in the investigation he would be better pre-pared to speak on this subject, but he appreciated its importance, as did every member of the committee, and he was dis-posed to be very liberal in all the recommendations which the committee might see fit to make. On the subject of a national foundry he was in favor of hearing the claims of all suitable localities, regarding this as an important part of the mission of the committee. To accomplish the work properly it would be important to have the Government take the matter under its own control. The construction of a testing machine, which could only have been successfully carried out by the Government, had already been demonstrated to have been wise and beneficial. The Government tests for private parties had been wholly satisfac-tory, and might in the future be extended into even broader usefulness.

EXPERIMENTS IN STEEL

War and of the Navy a statement of work Prim., gais. 6,430
775
165
176
187
188
1.430
Sew ma., es... 361
Sel Mar., pkgs... 301
Se

been eminently satisfactory. The plant of that establishment does not admit of the manufacture of the 8 and 10 inch guns, but the steel is reported at the Navy Department as superior in quality to that used in the tubes manufactured out of Shefield and Whitworth steel. The tests of steel from the Park establishment, at Pittsburgh, so far have not reached the standard, their tubes failing to stand the required tests.

RETURN OF THE COMMITTEE.

It is understood that the committee, after having made these preliminary examinations, siderable properties of the purchased a vast quantity of tools from 1878 to 1882, they are still amply equipped for any urgent business that may e sent in. For some time they have not been crowded with work.

Partial Stoppage of the Dowlais Iron Works.—It is reported from England that the excessive drought has diminished the water supply of the Dowlais Works, Wales, to such an extent that they have been forced to suspend operations altogether. Considerable properties and the standard of the manufacture of the sample quantity of tools from 1878 to 1882, they are still amply equipped for any urgent business that may e sent in. For some time they have not been crowded with work.

having made these preliminary examinations, will return to Washington in order to compare notes with the Ordnance Department, and to gather such information as their own more complete knowledge of the subject may suggest. It will be a question whether the national foundry should be a separate institution, or whether one of the arsenals or navy yards might be adapted to the work. The iron and steel industries can watch the labors of this committee in the expectation of some tangible results.

Maguire. Corps of Engineers, for the purpose of determining, as required by the provisions of "an act making appropriations for fortifications and other works of defense, &c., approved July 5, 1884," the various calibers, length of bore, greatest and least admissible weights of guns for each caliber together with the greatest. each caliber, together with the greatest and least weights of projectiles for each caliber of all the various calibers required for the service, together with the number of each caliber of gun required. The board is directed to assemble at the call of president thereof, and will report to the Secretary of War. Such journeys as are required will be authorized. authorized.

great loss is on the machinery. In that portion of the building facing Hamilton street men of the United States not misinterpret were 18 lathes, used in turning iron, steel and brass. Some of the lathes were worth great Republic."

\$1000 each, others as much as \$2500. On the second floor were 10 planing machines, used in planing iron, steel and brass. In this story were several "shaping" machines. Some of them were worth \$3000 apiece. Among the most expensive machinery in the building were the gaugers. They were all of exquisite workmanship, wonderfully accurate. They alone cost \$10,000. The bolt machines were worth more than \$10,000.

the second floor, in which was the engine outrage is calculated to strip workmen of machinery, and there were nearly 200 men the sympathy of the public in their labor working on the third floor, where were the struggles. It is only worthy of barbarians, patterns. No one was in the building, example and should at once be denounced in unsparcept the watchman, at the time the fire broke ing terms by the trades unions of the coun

The origin of the fire is not known. It is The committee referred to have had thought to have originated in the engine-placed in their possession by the Secretary of room, but the watchman is of the opinion that that portion of the building was struck to October 25, giving 61 exhibition days by lightning. The insurance on building and and 10 Sundays. Improvements have been

Partial Stoppage of the Dowlais Iron Works.—It is reported from England that the excessive drought has diminished the water supply of the Dowlais Works, Wales, to such an extent that they have been forced to suspend operations altogether. Considerably more than half of the iron works are at a standstill, and are likely to remain as unless a change takes place in the woother. are at a standstill, and are likely to remain so unless a change takes place in the weather. The Dowlais Works are supplied with water from many sources, the principal being a number of disused old mine pits in the Pantywaun district. From these the water is brought to the ponds just outside the district of Dowlais proper by means of pipes and watercourses. During the past few weeks various sections of the works bave been stopped, owing to the drought. Although the excessive heat has evaporated the water, some tangible results.

THE FISCAL YEAR AND THE TARIFF.
The actual reductions in revenues from the customs under the tariff act of 1883 have fallen short of the estimates, and some are disposed to take exception to the act on that account. The decrease in customs revenue for the fiscal year ended June 30, 1884, as compared with the same period last year, is \$19,250,000. The estimated reduction under the act was \$50,000,000. The effect of the bill on the revenues at the different principal ports possesses some interest. In New York, for instance, the decrease of revenue for 1884, as compared with 1883, was \$12,700,000, and at Philadelphia there was an increase of revenue amounting to \$735,000. In San Francisco the reduction was over \$3,000.000, in Chicago nearly \$300,000 and in Baltimore nearly \$750,000, and at New Orleans an increase of seven the sevenue of the sound of the work were stopped, so that at the present moment scarcely anything except the blast furnaces is giving employment to the workmen. In the Ivor or upper works, things are even worse, for the ponds supplying the water are almost dried up. On July 10 the whole of the blast furnaces were damped down, and the two great blast engines, the forges and the mills (with the exception of the big mill) were stopped.

in Chicago nearly \$300,000 and in Baltimore nearly \$750,000, and at New Orleans an increase of over \$16,000 The Treasury officials do not regard these figures as a final presentation of what the bill will do, but claim that another year will make them to strike an average. They regarded the results as more satisfactory in experiencing a gradual decrease than if the decrease had been larger and reached suddenly.

RIFLE CANNON COMMISSION.

The Secretary of War, by special order of July 26, has created a board of officers, to consist of Col. Thomas G. Baylor, Ordnance Department, Col. James C. Duane and Major W. R. King, Corps of Engineers, Maj. Geo.

W. McKee and Capt. Chas. Shaler, of the Ordnance Department, and Capt. Edward Maguire, Corps of Engineers, for the purchase of determining as required by the Hamburg were only 60,000 tons, while last year they were over 475,000 tons; during the same period the imports of English coal had been well maintained, thus showing that the competition so far had not materially affected this branch of the trade. The French consul at Düsseldorf also states that Westphalian coal is making progress, to the detriment of English, at Berlin. The coal owners of the Ruhr, indeed, state that they could relieve Germany from the annual could relieve Germany from the annual tribute of £300,000 paid to England if they could obtain a reduction in the railway rates from 6 to 5 marks per ton to Hamburg. This reduction, they allege, would enable them to compete successfully in Bertin as well as in

The following article is from the leading journal in Tokio, the Jiji Shimpo, and shows the high regard entertained by the Japanese for the United States: "The Americans speak that universal language, English, and speak that universal language, English, and their prosperous industry, their wonderful achievements in art and science, their rapid means of communication, their national prosperity, rising above the horizon of civilization like the morning sun, and finally their land itself, peopled by the most enterprising and vigorous offshoots of the old world, endear them to us ever more and more. There is no Japanese who entertains a feeling of hatred toward America, and, if there were, he would be treated as insane, and his opinions worth nothing more than the ravings of delirium. In our opinion there is Cuttery, pkgs. 3 63
Cartridges, cs. 4 56
M. dust, bis. 12
Yel, met'l., cs. 2 129
Nova Scotta.

Hdw., cs. . . 5 231
Iron, pkgs. . 24 231
British Possessiand.

Hdw., case. . 1 50
British Henduras
Ptlm., gals. . . 240
Sew. ma., cs. . 15 370
Mach'y, pkgs 2 2 38
S. rollers, cs. . 4 136
Copper, cs. . 15 370
Clocks, pkgs. . 9 256
Sew. ma., cs. . 7 1, pkgs 2 2 38
S. rollers, cs. . 4 136
Copper, cs. . 15 370
Clocks, pkgs. . 9 256
Sew. ma., cs. . 7 1, pkgs 2 2 38
S. rollers, cs. . 4 136
Copper, cs. . 15 370
Clocks, pkgs. . 9 256
Sew. ma., cs. . 7 1, pkgs 2 2 38
S. rollers, cs. . 15 370
Haere.

Mach'y, pkgs 2 2 643
S. rollers, cs. . 15 370
Clocks, pkgs. . 9 256
Sew. ma., cs. . 7 1, pkgs. . 15 370
Ptlm., gals. . 250
Clocks, pkgs. . 9 256
Sew. ma., cs. . 7 1, pkgs. . 15 370
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Sew. ma. cs. . 7 1, pkgs. . 9 256
Sew. ma. cs. . 7 1, pkgs. . 9 2

> The particulars of a horrible union outrage which occurred at Bradford, Pa, are given in the daily papers. The glass works at that place, which have been shut down for a month, were about to be reopened with non-union men. A French foreman had been engaged, and on the day mentioned he of exquisite workmanship, wonderfully accurate. They alone cost \$10,000. The bolt machines were worth more than \$10,000. Of the patterns, all of which were destroyed, about 100 were cylinder patterns. They alone 100 them suddenly attacked the works, secured the French foreman, and declard of valuable hydraulic machinery was destroyed, together with much machinery used in making wheels, nuts and the delicate metal work about an engine.
>
> There were employed in the building about 1000 men. About 600 of these worked in the boiler shop, a portion of which was not destroyed. Over 200 men were employed on the second floor, in which was the engine machinery, and there were nearly 200 men the sympathy of the public in their labor try. Will it be?

The Southern Exposition at Louisville, Ky., for this year, will be open from August

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Trade Report.

General Hardware.

The heavy rains which prevailed on Monday and Tuesday had a depressing effect on local trade, but there is an increase in the volume of general business and inquiries are coming in more freely. Southern trade continues moderate, but Western buyers are placing some orders, the trade, however, continuing rather light. There are no very important changes in price to which we have to direct the attention of our readers this week, but the new figures which are given below on some lines of goods will be of interest, and the discount sheets which we give of the well-known houses, Sargent & Co. and John H. Graham & Co., will be found worthy of the careful examination of merchants.

NAILS.

A fairly satisfactory trade is reported for lots of 500 to 1000 kegs changed hands, but the bulk of the sales consisted of small lots, ordered by those who distribute directly among consumers. We quote prices at \$2.30 @ \$2.35, with \$2.25 named as the bottom figure for large lots or to best buyers.

BARB WIRE. Sales continue to be mainly of small lots though a few large lots have helped to swell

the total of the week's business. Prices continue to be quoted at 5¢ \$\mathbb{H}\$ \$\mathbb{h}\$ for Painted and 6¢ P lb for Galvanized Four Point in small lots, and 4½¢ for Painted and 5½¢ for Galvanized in carload lots. SISE, GIBSON & CO.

The trade will be interested in the announcement of the copartnership which is given in the following circular. Mr. Sise is widely known as a prominent commission merchant of this city, with whom Joseph D. Williams has been associated for something like 14 years. Mr. Gibson is also known to the trade as having been connected for a long time with Barney & Berry, the prominent Skate manufacturers, and who is now putting on the market his own line of Skates. The new concern enter upon their business under very favorable auspices, and will have the best wishes of the trade for their success. The circulars, which we publish below, give formal announcement of the copartnership and describe the character of the business they expect to do:

100 CHAMBERS STREET, NEW YORK, August 1, 1884. The undersigned have this day formed a co-partnership under the firm name of Sise, Gibson & Co., for the continuance of the Hardware commission business heretofore done by Horace F. Sise, New York, and of manufacturing by Robert Gibson, at Birmingham, Conn. Accounts of both concerns will be adjusted at New York office.

Horace F. Sibe, Robert Gibson, (Late with Barney & Berry). Joseph D. Williams.

100 CHAMBERS STREET, NEW YORE, Aug. 1, 1884. GENTLEMEN.-Referring to the inclosed copartnership notice, it gives us pleasure to advise the trade that we shall continue to represent the prominent manufacturers heretofore represented by Horace F. Sise, and represent the proment manufacturers heretofore represented by Horace F. Sise, and
shall be prepared the coming season to offer
the lowest prices and best terms on the
standard lines made by the following parties:
Humphreysville Manufacturing Company,
Underhill Edge Tool Company, Thurston
Knob Screw Company, J. F. Wollensak,
Star Lock Works, Arcade File Works, New
London Scythe Company, Penn Hardware
Company, Barnes Manufacturing Company,
Roy & Co., D. Brewer & Co., L. Bommer,
F. O. North & Co., Moran & Sons, Franklin
Reed; Brown, Hinman & Co.; Tanett &
Beach Wire Goods Company, Pittsfield Tack
Company, F. F. Adams Company, Keystone
Screw Company, C. L. Bellamy & Co.,
Cleveland Block Company, G. M. Hotchkiss
& Co., the Meneely Hardware Company.
In connection with our manufacturing business, we are prepared to offer a complete
line of the "Gibson" Skates, which, for
elegance of design, workmanship and finish,
cannot be surpassed by any in the market.
We have this season introduced several new
styles of Skates, prominent among which is We have this season introduced several new styles of Skates, prominent among which is our new "Derby" Lever Skate. It is an entirely new departure. For simplicity strength and convenience it has no equal. Our Mr. Gibson will have personal supervision of our Skate manufacturing department. Soliciting your orders, we remain, Very respectfully, yours, Sise, Gibson & Co.

In connection with the above reference to the line of Skates, we may add that a catalogue is now in press, and will soon be issued to the trade. One of their attractive styles, the Ideal Roller Skate, is represented in Sise, Gibson & Co.'s advertisement on page 40, in this issue.

A. G. COES & CO'S WRENCHES.

We are advised that a patent suit, which has been in the courts for several years, brought by the Collins Company against John H. Coes et al, was decided July 30 by Judge Gray, in the Circuit Court of the United States, District of Massachusetts, in favor of the defendants. Owing to the pressure upon our columns this week we can only mention the fact as one of interest to the trade, reserving a fuller reference to our next issue. WIRE GOODS.

An agreement has been made, to which all the leading manufacturers in this line are parties, by which the discount on Bright | 8 Wire goods is fixed at 75 and 10 per cent. The expectation is expressed that this arrangement will work satisfactorily, and that prices will be maintained.

THE REED MANUFACTURING COMPANY, Canajoharie, N. Y., whose factory was recently destroyed by fire, have, with characteristic energy, secured a four-story brick building, of which they have already taken possession. It will serve them as a temporary factory, which they are putting in shape for the production of their specialties, They and their customers are fortunate in the fact that the warehouse containing their finished goods was not destroyed, so that they have something of a stock on hand with which to meet the orders that come in until they are in shape to produce new goods. Their trade in Barn Door Hangers, Pulleys, Gate Hinges, &c., during the past season was very satisfactory. Their Self-Lubricating Pulleys and Blocks, which are a leading line with them, are still quoted at discount 50 per cent.

THE COVERT MANUFACTURING COMPANY, West Troy, N. Y., have issued the following sheet of retail discounts, from which it will be seen that they have made reductions on several lines of their goods. They have also the week just ended. In a few instances put on the market Covert's New Patent Snap, patented April 22, 1884, the list for which is as follows, subject to a discount of 35 per cent. :

| Nos Size of Loop Per gross | 500 86 | 501 5.20 | 502 36 5,80 | 508 1 5.80 | 504 11/8 8 |
|----------------------------------|----------------------|---------------------|---------------------|------------------|------------------|
| Nos Size of Loop Per gross | 505 114 \$9.50 | 506 136 10.50 | 507 184 11.50 | 308 2 18 | 509 |
| Covert's " New | " Pate | nt Ro | und I | Eye Snay |). |
| Nos Size of Loop Per gross | | | | 515 36 \$8 | 516 8 8 |
| Their sheet of | discou | ants is | as f | ollows ! | |

| | | | | | | | DAS. | per | cent |
|-----------------|--------|--------|--------|--------|--------|---------|-------|-------|---------------------|
| Loop I | Iarn | ева В | naps. | | | | | | 8 |
| Martin | | | Clare | -2.0 | | | | | - |
| Round | Reve | 200 | 99 | Inn | | | | | 0.61 |
| Round | Klyra | Buch | to for | | | | | | - B |
| Loop 8 | Eye | ol . | 04 | | | | | | |
| Open 1 | SWE VI | EIR | 8.6 | | | | | | |
| | | | | | | | | | |
| Strap | Lye. | **** | Pilos. | | | *** | | | **** |
| Leathe | or He | orse ; | 1708 | | | | | | A 0 |
| Snap a | nd T | him | Mes | | | | | 0 | 0&1 |
| Thimb | | | | | | | | | |
| Hamm | tock | Rope | 18 | | | | | | 6 |
| Horse | Tie (| Snap | and | Thimb | le) J | Hemp | | | 6 |
| 66 | 86 | 99 | 8.0 | 6.9 | | nte | | 5 | 0&1 |
| Cattle | 80 | 9.6 | 66 | 11 | E | lemp. | | | 8 |
| 6.6 | 44 | 8.0 | 9.8 | 64 | .1 | lurko . | | - A | (A.D.) |
| Lariat | Tetl | ièr | | | | | | | 8 |
| Picket | Pins | | | | | | | | 4 |
| Horse | Tio. | OK | | | | | | | 0.8-1 |
| Horse Cattle | 66 | 44 | | | | | | | 0.01 |
| Web F | talta | PG. | | | | ***** | **** | O | 0.8-1 |
| Rope | An and | Bucci | | | | | | 0 | 1300 |
| Driving | The | 0000 | | | | | | | OUGE |
| Wateh | g ree | ms. | | ****** | ** * * | | | | 4 |
| weign | t Coi | rus | ***** | | | | | | 3 |
| Hitchi | | | | | | | | | |
| Breast | Cha | Ins | | | 0 00 | | | | 8 |
| Post | Chi | | | | | | | | |
| Halter | | | | | | | | | . , 5 |
| Rein | | | | | | | | | 51 |
| Martin | gale | 46 | | | | | | | 34 |
| Hod Po | 1 Jac | iitch | Br | | | | 11110 | 11110 | 0×10^{-10} |
| Lytle I | Bull 1 | Lead | | | | | | | 4 |
| Bull Sr | aps | | | | | | | | 40 |
| Solder | ng I | rons | | | | | | | 3 |
| 8.6 | - C | onne | dres | | | | | | 9 |
| Hitchi | no O | otrola | | | | | | * 1 | 9 |
| Halter | Loo | da (F | amm) | | | **** | | **** | K OF |
| THE PARTY OF | 71 | CT. | via) | | *** | | | ** ** | 0.6-10 |
| Roma | The Ch | TI old | A60) | | | | | 36 | ACE II |
| Horse | Time | Troid | CEB | | | | | | 20 |

The following revised list for Manila and Sisal Rope, &c., has been issued, from which it will be seen that there has been another 122 Change List No. 105 to 50¢. advance in Manila. The market remains very firm, owing to the exceedingly limited offerings of Hemp. The list as given below is subject to the usual trade discount of I cent per pound : Manila Rope.

CORDAGE.

| Manila Rope, | |
|--|--|
| 134 inch eir. and upward | 1536 16 1616 1516 17 15 16 |
| Sinal Rope. | |
| 1½ inch dir. and upward. 1² thread, or ½ inch diameter. 6 and 9 thread, or ½ and 5-16 inch diameter. Hay Rope, 2, 8, 4 or 5 thread. Tarred Rope and Lath Yarn. | 93-6 10 103-6 93-8 9 |
| Russia Hemp. | |
| White Rope. Tarred Rope and Ratline. Spun Yara Bolt Rope. Marline, Houseline, Rounding and Hambro- | 17 11 1016 18 |
| Packing | 15 16 |
| American Hemp. | |
| White Rope. Tarred Rope and Ratline. Spun Yara. Lath Yarn. Packing. Marline, Houseline, Rounding and Hambro- | 18 1936 12 1236 1236 |
| line | 16 |
| Sash and Bell Cord | to 85 |
| Italian Hemp. | |
| Packing | 20 16 |
| Rope and Packing | |
| Oakum. | 0 |
| | |
| Best Oakum | 8 634 |
| Discounts to Dealers. | - |

| On 100 bales and over | | 34 | |
|---------------------------------------|-----------|----------|---|
| JOHN H. GRAHAM & | CO., | 1.0 | 1 |
| 113 Chambers street, have iss | | number | H |
| of supplementary pages for t | | | |
| | | | В |
| of 1881, and also an appendix | | | |
| occupying some 40 pages and | | | |
| important lines. They are al | so send | ing out | |
| a discount sheet, which we h | | | l |
| our readers . | or o surj | 001010 | П |
| Pages in | | | ı |
| Pages in 1881 Cat. | | Dis. | |
| 11, Circular and Veneering Saws | | er cent. | 1 |
| Change List, 58 in., \$130; 60 in | \$145 : | 62 in. | |
| \$160 ; 64 in., \$180 ; 66 in., \$200 | : 68 in | \$995 | 1 |
| 70 in., \$255 ; 72 in., \$290 ; 74 in | ., \$880; | 76 in., | 1 |
| \$375. 12, Saw Mandrels | | 00 | 1 |
| 12. Gummer Cutters | | 90 | 1 |
| 13-14, Saw Gummers | | 20 | i |
| 15, Tillers and Boxes for Pit Saws. | | 45 | i |
| 15, Pit and Whip Saws | | 45 | |
| 16-24, Saws and Handles | | 45 | 1 |
| 25–26, Swages | | 90 | 1 |
| 27, Setting Stake for Circular Saw | | 90 | 1 |
| 28. Side File | | 90 | i |
| IU, Saw Clamps | | | 1 |
| | | | 1 |
| se ou, maws all kinds | | 20 | 1 |
| 16, Add following sizes: | | | 1 |
| Inches, 16 18 20 | 22 24 | 30 | |

| 1881 Cat. | | | Y) e | r cent. |
|---|------------|-------------|------------|---------|
| 1, Circular and V | eneering | g Saws. | Pie | dent. |
| Change List, 5 | 8 in., \$1 | 30: 60 in | \$145 : 6 | 2 in. |
| \$160 : 64 in., \$ | 180 : 66 | in., \$200 | : 68 in. 5 | 2995 |
| 70 in., \$255 ; 75 | in., \$2 | 90 ; 74 in. | , \$330; 7 | 6 in., |
| \$375, | | | | |
| 2, Saw Mandrels. | | | | 20 |
| 2. Gummer Cutte | PB | | | 20 |
| 8-14, Saw Gumme | NB | | | 20 |
| 5, Tillers and Box | tes for h | 'it Saws. | | 45 |
| 5, Pit and Whip 8 | aws | | | 40 |
| 6-24, Saws and H 5-26, Swages | andress. | | | 40 |
| 7-29, Saw Sets | | | | 00 |
| 7, Setting Stake f | or Circu | lar Saw | | 90 |
| 8, Side File | or care | THE CHEN | | 90 |
| 0, Saw Clamps | | | | 90 |
| I, WIFE GAUSES | | | | |
| 2 50, Saws all kin | ds | | | 90 |
| 6, Add following | sizes : | | | |
| Inches, 16 | 18 | 90 | 20 24 | 30 |
| D8, \$15.00 | 16.50 | 18.00 20 | .50 22.00 | 80.00 |
| Inches, 16 | 18 | 200 | 20 | 94 |
| Inches, 16 No. 76, \$14.00 Inches, 16 | 15.50 | 17.00 | 19.00 | |
| Inches, 16 | 18 | 200 | . 22 | 24 |
| No. 120, \$35,00 | 27,00 | 29,00 | 82.00 | 84.00 |
| | | | | |

| 41, (| Change | List No. | 29, Sav | v, to \$11 | • | | |
|--------|-----------|---|-----------|------------|-----------|----------|-----------|
| | Inches | . 12 | 14 | 16 | 18 | 20 | |
| | No. 7, | \$7.50 22 | 8.50 | 9.50 | 10,50 | 11.50 | |
| | Inches | 22 | 24 | aris . | 26 | | |
| | Inches | \$7.50 22 \$13.00 12 \$5.50 22 \$9.50 | 14 % | 16 | 18 | 20 | |
| | No. 8. | \$5.50 | 6,00 | 6.75 | 7.50 | 8.50 | |
| | Inches | 22 | 24 | | 26 | | |
| | | 00100 | | | | | |
| 47, . | Add th | e followi | ng Bucl | Saws: | 00 | | |
| | No | \$10.50 | 10.50 | 0.95 | 6.50 | | |
| 40. | Wood 8 | law Fran | nes | | | | 90 |
| 50. | Wood S | Saw Buc | F8 | | | | 20 |
| 51, 1 | Saw R | ods | | | | | Ø() |
| B8 4 | Change | odss and Ha | med H | ack Sau | 78- | | 90 |
| Inch | O. Inning | 8 9 | 10 | 11 | 12 1 | 4 10 | 6 |
| | 5 3. | 25 13.75 | 14.25 | 14,75 1 | 5.25 16 | .75 17 3 | 25 |
| 56-5 | 7, Trov | vels e and Cor t Scrape | | ***** | ****** | | 20 |
| 58-5 | 9, Cane | and Cor | n Knive | 35 | | | 80 |
| 59, (| Cabine | t Scrape nge List (| Is | ivon | | | 18) 92 |
| | No. | 19 | 90 K | 13 | 85 | 11 | 90 |
| | No | \$8.00 | 7.95 | 7.50 | 7.25 | 7.25 | |
| | No | 19 \$8.00 1 1 87.00 7 | 8 50 | 40 | 45 | 65 | |
| | 1 | \$7.00 7. | 25 9.8 | 8:75 | 6.50 | 9.50 | |
| 60, 1 | Post-H | ole Digge | F | ** **** | ****** | | d |
| 61- 1 | Prunin | e List, \$8 g Hook a | nd Sau | | | | 20 |
| 61. | Prunin | g Saws a e List— | nd Knif | 0 | ****** | | 20 |
| | | | | | | | |
| | Prun | ing Hool | and S | IW 10 | | 19.00 | |
| | Prnn | ang Hool k only to. hing Saw s' Tools e List Br. 71/6 8 \$7.50 8.0 11 111 111.00 11.1 | and Kr | ife. Jar | 'd | 11.00 | |
| | | 6.6 | 60 | Tini | ned | 18.50 | |
| 62, 1 | Molder | g' Tools, . | ****** | ***** | ****** | | 20 |
| 04, | Chang | o Liet Re | lok Tro | wols_T | andon P | attern | g(|
| | Inch | 736 8 | 814 | 9 91 | 4 10 | 1016 | |
| | | \$7.50 8.0 | 0 8,50 | 9.00 9, | 50 10,00 | 10,50 | |
| | Inch. | 11 113 | 9 12 | 1236 1 | 8 1834 | 18 00 | |
| | Philad | elphia Pa | ttern- | 18/10 18 | .00 19.W | 3 10.00 | |
| | Inch | | 8 84 | 0 1 | 16 10 | 1016 | |
| | | \$9.50 1 | 0.00 10.5 | 0 11.00 1 | 1,50 12.0 | 0 12,50 | |
| | Inch. | 11 111 | 118 | 1236 1 | 80 16 9 | 17 00 | |
| | Dalastin | 13.00 13.0 | 14.00 | 14.70 10 | .00 10,20 | 17.00 | |
| | Inch | g Trowe | 41.4 | 8 | 514 | 6 | |
| | AIRCES | \$4.25 | 4.80 | 4.75 | 5,00 | 5,25 | |
| 65, 1 | Handle | W | | | | | 90 |
| 65, 8 | Saw Sc | rews s, Square | | ****** | | | 30 |
| 06-6 | 7, Rule | s, Square | es and | duages. | ******* | | 30 |
| ESM. 1 | avels. | Straight ad Crout | EGR6 1 | ana saua | are | with the | ØU |
| un, i | Chang | e List. (| Prout C | uttern. | | | - |
| | O AL- | Mr. 96 w 15 | | | | | |

| Pointing | Thomas. | ~ | | | |
|-----------------------------|-------------------------------|-----------|----------|-----------|-----------|
| Inch | Trower | 414 | 8 | 514 | . 16 |
| Ancia | \$4,25 | 4,80 | 4.75 | 5.00 | 8,25 |
| 65, Handles | | | | | 9 |
| 65, Saw Scre | ws | | ******* | | 9 |
| 66-67, Rules. | Square | s and (| luages. | ******* | 3 |
| 68, Levels, 5 | straight | Edge a | nd Squa | we | 2 |
| 69, Slaw and | Crout | Cutters | ******* | | |
| Change | List. C | rout Cu | itters. | | |
| 2 Knives | , 96 X 12 | 10 \$4.0 | each. | | |
| 8 11 | 86 x 12 | to \$0.0 | 0 1 | | |
| 2 | 40 X 12 | to \$6.4 | 0 11 | | |
| 0 11 | 40 x 12 40 x 19 40 x 19 | 10 87.4 | K 11 | | |
| 70, Barker's | Doubte. | 10 901 | 0 | | 0 |
| 72-74, Squar | putts. | tomolo | | | 4 |
| 7% Chierron | em tetto t | severs. | ****** | | 4 |
| 75, Guages. 76-77, Screw | Dulmon | Hand | los and | Powerske | 4 |
| 78, Wrench | and Sere | an Driv | ros auu | FOLLUNG | 4 |
| 79-81, Pluml | on and | Levels. | Pocke | Lovel | and |
| Level Glas | | | | e areven | 4 |
| 80-81, Chang | red List | Plumbe | and Le | vels. | |
| No., 100 | 16 10 | 1116 | 10216 | 10436 | |
| No 100 \$8. | 00 16 | 3.00 | 11.00 | 11.00 | |
| No | 107 | 108 | | 109 | |
| | 107 \$19.00 | 16.0 | 0 1 | 7.50 | |
| 82, Files | | | | | 50&1 |
| 84-118, * Ben | ch Plan | es, first | grade. | all kin | ds ex- |
| cept such | as are n | narked | " net." | | |
| Fancy | Planes, | all kind | 8 | | 11 |
| * Ogonta | | | | | |
| | None | | | | |
| cept Sur | | | e and J | ointer P | lanes. |
| 110, Reeding | | | | | |
| Plane to | cut one | Reed 3 | 16 to % | , \$1.00 | |
| | two | - 44 | | 1.40 | |
| 44 44 | three | 44 | 10 10 98 | 1.80 | |
| | tour | | 084 | 3.20 | |
| and for l | arger st | all kin | got ab | to 98. | O/ |
| 114-116, * Pla | me iron, | thorn U | Coon | ***** | ** ** ** |
| New 117, Ger | d Stock | Diant. | TIO | **** **** | EO. P. 10 |

| 0 | NoricsNone made of Ogontz brand ex- |
|---------------|---|
| 5 0 0 | cept Smooth, Jack, Fore and Jointer Planes. |
| U | 110, Reeding Flane No. 152. |
| | Plane to cut one Reed 8-16 to %, \$1.00 |
| 0 | LWO 1,40 |
| Ü | " " three " 1.80 |
| U. | " " four " " 2.20 |
| 0 | and for larger sizes add 25¢ up to 56. |
| Ų. | 114-116, * Plane iron, all kinds 90 |
| 2 | New 117, German Pattern Hoes50 |
| 3 | " 118, Solid Steel Planters' Hoes 50&10 |
| 0 | " 118, " " Scovil Pattern Hoes50&10 |
| 0 0 5 5 5 0 0 | 119, Awls and Tools |
| 0 | 119, Brad Awls |
| U | 119, Pegging Awls 50 |
| | 119, Pegging Awis |
| | 121, * Gauges |
| ı | 121, Saw Handles |
| | 122, Plane Handles |
| | |

| П | 28, Chisel Handles | 4 |
|---|--|-----|
| П | 24, * Bench Screws | 8 |
| П | 24, * Tall Screws | . 2 |
| П | 24, File and Brad Handles | 136 |
| U | 24, Auger Handles | 2 |
| п | 25, * Hand Screws | 1 |
| L | 25, Rollinsg Pins, Beef Mauls and Pots | to |
| L | Mashers | 8 |
| 1 | 26-128, * Coopers' Tools and Jointers | . 2 |
| п | 29 Coopers' Drivers 1 | 5&1 |
| | 00 M | - 0 |

| 130-131, Mallets (except fron King) | | | .102 |
|---|-----|------|-------|
| 130, Round fron Ring Mallets, Nos. 15 and | 1 | 7. | .25& |
| 181, Bung Starters | | | .85& |
| 132, Flint and Emery Paper | 0 | 6 0 | 2008. |
| 132, Emery Cloth | | . 50 | |
| 132, Emery Cloth | 0 | ti | 0 36. |
| 84,50; 2 to 3, 85: | | | |
| Harrison Flint Paper to \$4 | | | |
| Penn Mills do. to \$3.50 | | | |
| 133, Tailors' Measures | | | 25& |
| 133, Shoemakers' Tapes | | | .25& |
| 134, Spring Measuring Tapes | * * | | |
| 134, Steel Spring Tapes | | | .25& |
| 135-141, Measuring Tapes, all kinds | | | 258 |
| 4 - 2 - 24 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - | | | 10.0 |

249, American Can Opener... 249, Wheel Can Opener... 249, Fluting Scissors... 250, Curling Tongs... 250, "Irons, No. 185... 250, "Irons, No. 185... 250, Pinching Irons, No. 187... 251, Pinking Irons, No. 188... 251, Pinking Irons, No. 188...

246, " 118.
247, Burner Plyers, " 120.
247, " 131
247, " 131
247, " 131
248, Sardine Scissors.
248, Can Opener, No. 124 (not made).
248, Sardine " 125.
248, " 126.
249, American Can Opener.
249, Wheel Can Opener.

| | 135-141, Measuring Tapes, all kinds |
|------|--|
| - | 142, Boring Machines 40&10 |
| 17 | 142, Boring Machine Augers 60 |
| 1 | 143, Snell's C. S. Augers |
| 1016 | 143, " Long Millwright Augers |
| 18 | 148, " Rafting Augers50&10 |
| | 148 Rates' C S Auger Rits (not made) |
| 5 | 143, Bates' C. S. Auger Bits (not made) |
| 6 | 144, Snell's Car Bits |
| | 144, Suell's Car Dits |
| | 144, " C. S. Auger Bits 60 144, " Jennings' Bits 50 144, Boat Builders' C. S. Bits 40&10 |
| 8 | 144, Jennings Bits |
| 236 | 144, Boat Builders C. S. Bits |
| 2 " | 144, Double Spur Plug Bits40&10 |
| 216 | 145, Taper Pod Gimlets40&10 |
| 7" | 145, " Gimlet Bits40&10 |
| | 145, Countersink Gimlet Bits40&10 |
| 6 | 145, Screw Driver Bits40&10 |
| 85 | 146, Hollow Augers40 |
| 100 | 146, Spoke Trimmers50 |
| | 147, Coes's Screw Wrenches60 |
| 0 | 149, Solid Box Vises |
| 6 | Change list Nos. 85, 89 : 40, 89,50 |
| - | Change list Nos. 85, 89; 40, 89.50 |
| | 149-158, Make list of Hunt's Eye Picks and Mat- |
| 8 | tooks same as Adze Eve |

| | tocks same as Adze Eye |
|-----|------------------------|
| | 149-150, Mattocks |
| | 151, Grub Hoes |
| | 153, Coopers' Froes |
| 2.0 | 152, Railroad Picks |
| 14 | 158, " |
| | 158, Tamping Picks |
| 14 | 154, Coal Picks |
| | 154, Stone Picks |
| 8 | 155, Surface Picks |
| | 188 Onifiles Deales |
| r | 155, Drifting Picks |
| - | 156, Poll Picks |

| 8- | 157, Solid Eye Blanks |
|----------|---------------------------------|
| o,), | Blacksmith Sledges, Steel Face |
| D, | " Solid Cast Ste |
|), | Stone Sledges, Steel Face |
|), | " Solid Cast Steel |
| l, | Striking Sledges, Steel Face |
| Ι, | Solid Cast Steel. |
| ١, | Coal Sledges, Steel Face |
| , | " Solid Cast Steel |
| , | Stone or Granite Ax, Steel Face |
| | " Solid Cast St |
| | Mason Hammer Steel Face |

| L. Solid Cast Steel | . 0 |
|---|-----|
| Mason Hammer, Steel Face | .5 |
| Solid Cast Steel | .6 |
| R, Spalling Hammers, Steel Face | .5 |
| Solid Cast Steel | .6 |
| Blacksmith Hand Hammers, Steel Face | |
| 8 Solid Cast Steel | |
| I, Hand Drilling and Striking Hammers, Stee | 1 |
| | .5 |
| Hand Drilling and Striking Hammers, Solid | |
| Cast Steel | .6 |
| , Napping Hammers, Steel Face | |
| Solid Cast Steel | . 6 |
| , Wood Choppers' Maul, Steel Face | .5 |
| " Solid Cast Steel | ,6 |
| , Railroad Spike Mauls, Steel Face | ,5 |
| " " Solid Cast Steel | .0 |

| o, Dritting Picks | 200, 100, 100, |
|--|---|
| 6, Poll Picks50&10 | 250, Pinching Irons, No. 187 860, No. 138. |
| 6. Mill Picks. 50.8-10 | 250. " No. 189 |
| 6_157 Solid Eve Blanks 508-10 | 951 * Pinking Irons |
| 6–157, Solid Eye Blanks | 251, Pinking Irons. 251, " made to order. 251, Marking or Scratch Awis. |
| O Discharge Man Con Asses Charles The Contract of the Contract | All Manhing on Countab Audis |
| 0, Blackstnith Sledges, Steel Face50 | 251, Marking or Scratch Awis |
| 0, " Solid Cast Steel60 | 251, Belt Awls |
| 0. Stone Sledges, Steel Face | 251, Ice Picks |
| 0. " Solid Cast Steel 60 | 251. Cattle Punches or Branders |
| 1. Striking Sledges Steel Face 50 | 251, Glass Plyers |
| 1, Striking Sledges, Steel Face | 252, Club Skates |
| Control Charles Otto Process Stock | 258, Family Glue Pot |
| 1, Coal Sledges, Steel Face50 | 208, Family Glue Pot |
| 1. Solid Cast Steel 60 | 203, Domestic vise |
| 1, Stone or Granite Ax, Steel Face50 | 254-255, C. S. Shears and Scissors |
| 1, " Solid Cast Steel60 | 984 986 Change Tiet Giveloht Polymone |
| 9 Mason Hammer Steel Face 50 | 254-256, Change List Straight Trimmers, and Nickeled, 61/2 in., \$12; 7 in. \$14; 7; \$15; 8 in., \$16; 81/2 in., \$17; 9 in., \$19; 1 \$25; 11 in., \$80; 12 in., \$38. |
| 9 44 Solid Cout Steel 60 | and Nickeled, on in., \$16; 7 in., \$14; 7 |
| Solid Cast Steel | \$15; 8 in., \$10; 816 in., \$17; 9 in., \$19; |
| z, spaning Hammers, Steel Face | \$95; 11 in., \$80; 18 in., \$83. |
| 2, Spalling Hammers, Steel Face. 50 2, Spalling Hammers, Steel Face. 50 2, Solid Cast Steel 60 | 255-256, Bankers' Shears, 10 in., \$25. |
| 2. Blacksmith Hand Hammers, Steel Face50 Solid Cast Steel.60 | 400-400, Distincts Calentes, to Mr., 400. |
| 2. " Solid Cast Steel 60 | 254, Empire Shears |
| 8, Hand Drilling and Striking Hammers, Steel | 255, Cast Shears |
| Free So | 256, Nickeled C. S. Shears and Scissors |
| Face | 256, " Empire Shears |
| o, mand Drilling and Striking Hammers, Bond | 257, Geneva Fluters |
| Cast Steel | 258, Fluting Machines |
| 8, Napping Hammers, Steel Face 50 | 268, Rollers, Heaters and Tongs |
| R Gold Cast Steel 60 | 200, Rollers, Heaters and Tongs |
| i, Wood Choppers' Maul, Steel Face | 259, Fluting Machines |
| " Solid Cast Steel 60 | 260, Laundry Polishing Irons |
| , Railroad Spike Mauls, Steel Face50 | Sad and Troy Irons |
| Manifold Spine Madis, Stock Face | 261, Troy Polishing Irons |
| , " " Solid Cast Steel 60 | 261-262, Toilet Smoothing Irons |
| 4, " Track Chisel | 262, Brim Irons |
| 5, Ship or Top Maul, Steel Face | (00) Por Dectary |
| S. " " Solid Cast Steel | 963, Egg Beaters |
| Wood Choppers' Wedges50 | 268, Thermometers |
| Coal Wedges | 264, Metallic Flour Sieves |
| Coar wenges | 964, Jelly Sieves |
| Two per cent discount for cash if paid on or | 264, Champion Metallic Sieves |
| fore 10 days from date of shipment. | 265, Ripley's Automatic Boot Jack |
| toto to do a from date of smbmone. | was rethred a wasserment poor decr |
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| | | 4 |
|-----|---|--------|
| | 165, Stone " | |
| | 166-168, Kip's Hammers Cancel pages 166 to 168. See pages in Appendix for Hartford Hammer Co. goods. | |
| | pendix for Hartford Hammer Co. goods. | 1 |
| | 169, Blood's Axes | 1 |
| | ets | 1 |
| | 176, Blood's Scythes, Grass, Bush and Lawn, less \$2 off list | 1 |
| | 176, Blood's Scythes, Grain, less \$3.95 off list Net | 1 |
| | 177. Grass Hooks 40 177. Corn Knives 50 177. Bush Hooks 30 179. Scythe Snaths 40&5 184. Handles and Ferrules Net Cancel pages 180-184. Net Net 181. Torke Bukes 50 | 1 |
| 0 | 177, " Bush Hooks | 1 |
| 00 | 184, Handles and FerrulesNet | 1 |
| 10 | Cancel pages 190-184. New 180-181, Forks, Rakes, &c | 13 |
| 1 | 188, Daisy Lawn Mower, 19 in., \$8.50; 14 in., \$9; | - 5 |
| 25 | 188, Corn Husker | 1 |
| 09 | 189, Gleaner and BinderNet | 1 5 |
| 10 | 191, Hay Rake | 100.00 |
| 10 | 192, Harrow | 1 |
| | 211, Cheese and Butter Tryers20 | 1 5 |
| | 211, Flour Tryers | 1 |
| 90 | 212, Flour Testers | 13 |
| 10 | 212, Coffee Tryers | 13 |
| 90 | 179, Scythe Snaths | 1 5 |
| | 213, Pocket Butter and Cheese Tryers20 | 13 |
| | 214, Ham Tryets20 | 1 |
| | 214, Ham Stringers20 | 13 |
| 10 | 214, Banana Knife | 13 |
| | 215, Wire Gauges | 1 |
| | 216, Bench Saw Sets | 18 |
| | 217, Bench Hooks | 18 |
| | 217, Spoke Shaves | 1 |
| | 218, " No. 3 | 1 |
| | 219, Bull Rings | ı |
| | 219, Pruning Shears | 1 |
| | 220, Carpet Stretchers | 1 |
| 0 | 221, Robinson Crank Wrench | 1 |
| 00 | 223, 15 to 84 in | 18 |
| ő | 23, Compasses | 18 |
| 10 | 999, 11 15 to 24 | 1 3 |
| | 224, 15 to 2440 | ľ |
| | 224, Double Calipers | ı |
| | 224, Fancy " | ı |
| 0 | 206, Turner's Gauges | |
| 5 | 226, Saw Sets | 1 |
| 5 | 226, Rivet "50 | 1, |
| | 227, Box Scrapers, No. 16 | â |
| 5 | 228, Welet Sets | 3 |
| | 227, BAYE | 8 |
| | 229, Spring 40 229, Conductors' 25 | 1 |
| 0 | 229, Conductors' 25 229, Round or Belt Punches, Nos. 1 to 10 | 8 |
| | 220, " Nos. 11 to 1685 | 8 |
| 0 5 | 230, "Punches | 5260: |
| 5 | 231. Button Hole Cutter | 3 8 |
| 1 | 281, Counter Sinks | 8 |
| | 281, Square Reamers | 8 |
| | 282, Tinners' Tools60 | 8 |
| 1 | 232, Box Chisels, No. 33 | 3 |
| 0 | 232, " Hooks | 3 |
| 0:1 | 293, Cotton " No. 43,60 | 8 |
| 0 | 231, Counter Sinks 60 231, Server Driver Bits 60 231, Square Reamers 60 231, Prick Punches 60 232, Tinners' Tools 60 232, Tinners' Tools 60 232, Box Chieels, No. 39 45 232, "Hooks 60 233, " 50 233, " 50 233, " 50 234, Cotton No. 43, 60 234, " No. 44, 60 234, Hay 50 234, Hay 50 244, Ham Tryers 20 | |
| 0 | 333. Hay 50 234. Ham Tryers 20 234. Ol-Clobb Knives 15 234. Ol-Clobb Knives 85 234. Chaupagne 40 234. Tracing Wheels 60 234. Nut Crackers 40 235. Cigar Knives 25 235. Cigar-Box Opener, No. 55 40 235. Qyster Knives 25 235. Qyster Knives 30 236. Qyster Knives 30 237. Qyster Knives 30 238. Peg Breaks, No. 59 40 | 8 3 |
| 0 | 284, Oil-Cloth Knives85 | 3 |
| 5 | 234, Champagne " | 3 |
| ó | 234, Nut Crackers | 8 |
| 1 | 285, Clam 16 85 | 200 |
| | 285; Cigar-Box Opener, No. 55 | 8 |
| 5 | 235, Qyster Knives | 8 |
| | 236, 45 287, Peg Breaks, No. 59 | |
| | 235, Peg Breaks, No. 59. 40 236, '' '' 60. 80 236, '' '' 61. 40 | |
| -1 | 200, | 8 |
|) [| 236, " " 68 15 | 9 |

| - | The state of the s |
|---|--|
| | |
| 50 | 965, Folding Boot Jack. 265, Lemon Squeezers. 266, Steak Hammers and Ice Hatchets. 266, Steak Hammers and Ice Hatchets. 266, Steak Hammers and Ice Hatchets. 269, Light Hand Bells. 269, Heavy " 269, Tinned Swiss Hand Bells. 270, Tinned Swiss Hand Bells. 270, Mikman Bell. 270, Mikman Bell. 270, House Bells. 270, Larm Tills. 270, Larm Tills. 271, Tea and Counter Scales 273, Union Platform. 275, Side and Table Mills. 276, Swift Mills. 296, Stand Mills. 286, Coffee Roasters. 289, Measuring Faucets. 289, Measuring Faucets. 289, Carriage Jacks. 291-290, Coffee Mills. 291-290, Coffee Mills. 296, Soap Trays. 296, Money Iss. 296, Money Iss. 297, Swift Mills. 298, Soap Trays. 298, Money Iss. 298, Soap Trays. 296, Money Iss. 296, Money Iss. 296, Soap Trays. 296, Money Knives. |
| | 965 Lamon Squaggers |
| 93. | 965 Rosewood Faugots |
| p- | 986 Stook Hammore and Ice Hatchete 98 |
| 08:10 | ORC Dance Startown |
| 35 | ose Wallets |
| h- | 900 Tight Band Dalls 706 |
| 85 | 1 060 Honey ii ii |
| | 200, Heavy |
| 80.4 | 200, Michael Dietad Graine Hand Dolla |
| Net | 209, Nicket-Flated Swiss Hand Dens |
| Net | 970 Too Delle |
| 40 | 200 Trans Della |
| 80 | 270, House Bells |
| | 270, Alarm Tills |
| 10&5 | 272, Tea and Counter Scales |
| Net | 278, Union Platform |
| | 275, Side and Table Mills |
| 50 | 276-285, Swift Mills |
| 9; | . 236, Stand Mills |
| Net | 286, Post " |
| 25 | 287, Swift " |
| Net | 288, Coffee Roasters |
| 80 | 289. Measuring Faucets |
| 90 | 290, Carriage Jacks |
| . 90 | 291-295, Coffee Mills |
| 20 | Change list No. 1: \$5: 101. \$5: No. 28, \$8.50. |
| 20 | 296, Soap Trays |
| 20 | 298 Mincing Knives |
| 20 | 200 Tack Hammer |
| 20 | 297. Ice Hatchets 40.6 |
| 30 | 997. Tov 16 |
| 20 | 207 Steel Screw-Drivers |
| 20 | 207. Cottage Candlestick |
| 20 | 206 Boot Jack |
| 20 | 298 Match Safes |
| - 283 | 298. Towel Roller Ends |
| 20 | 209_308 Curry Comba |
| 20 | 809 Ox Row Pine |
| 20 | 296, Soap Trays. 408 296, Mincing Knives. 297, Tack Hammer 297, Toe Hatchets. 408 297, Toy 297, Steel Screw-Drivers. 297, Cottage Candlestick 298, Boot Jack. 298, Match Safes. 298, Towel Roller Ends 299-208, Curry Combs. 309, Ox Bow Prns. 309, Ox Bow Prns. 309, Ox Bow Leters 309, Cattle Leaders 309, Match Leaders 309, Soap Bow Prns. 309, Cattle Leaders 309, Soap Bow Prns. 309, Cattle Leaders 309, Cattle Leaders 309, Cattle Leaders |
| .20 | 900 Pat Village |
| 25 | 910 Mouro Thomas |
| 60 | 910 Steel |
| 10 | 011 Cotton and Wool Canda |
| 20 | 111 Tow and Um Chou Cards |
| . 20 | 911 Towns and Control 11 |
| 20 | 308, Rat Killers. 310, Mouse Traps. 310, Steel 611, Cotton and Wool Cards. 311, Toward Jim Crow Cards. 311, Horse and Curry Change list cotton cards. Per |
| 20 | dor nalm |
| 15 | No. 10, XXX. Warranted Whittemore's |
| 30 | 1076 x 456 inches |
| 30 | No 10, XXX, Warranted, Whittemore's \$5.00 No. 10, XX, Whittemore's 107, x 496 in. 4.75 No. 10, XI, Whittemore's (small size), |
| .50 | No. 10, X. Whittemore's (small size), |
| 10 | 10% x 4% inches 4.50 |
| 30 | The above constitute all the qualities and |
| .20 | |
| | |
| 80 | 814. Whtfiletres Hooks |
| 80 | 814, Whiffletree Hooks |
| 40 | 814, Whifiletres Hooks |
| 80 | 914, Whiffletres Hooks |
| 60 60 60 | 814, Whifflekree Hooks |
| 60 60 60 40 | 814, Whiffletres Hooks |
| 60 60 60 40 60 | 814, Whiffletres Hooks |
| 60 60 60 40 60 40 | 814, Whiffletres Hooks |
| 60 60 60 40 60 40 60 | 814 Whiffletres Hooks |
| 60 60 60 40 60 40 60 | 114 Whiffletree Hooks |
| 60 60 60 40 60 60 60 60 | 114 Whiffletres Hooks |
| 60 60 60 60 40 60 60 60 | 114 Whiffletres Hooks |
| 60 60 60 40 60 60 60 60 40 40 | 114 Whiffletres Hooks |
| 60 60 60 40 60 60 60 40 40 40 | 814, Whiffletres Hooks 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| 60 60 60 60 40 60 60 60 40 40 40 40 | 814, Whiffletres Hooks 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| 60 60 60 40 60 60 60 40 40 40 45 40 45 | 814, Whiffletres Hooks 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| 60 60 60 40 60 60 60 40 45 40 35 35 | 814, Whiffletres Hooks 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| 60 60 60 60 40 60 60 60 40 40 45 40 45 45 45 | 814, Whiffletres Hooks 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| 60 60 60 40 60 60 60 40 40 40 45 45 45 45 | ## ## ### ### ### ### ### ### ### ### |
| 60 40 60 40 40 60 60 40 45 45 45 45 45 | ## ## ### ### ### ### ### ### ### ### |
| 60 40 60 40 60 60 40 40 40 45 45 45 45 45 45 45 45 | 1314 Whiffletres Hooks |
| 60 60 60 60 40 60 60 40 40 45 45 45 45 45 45 | 1314 Whiffletres Hooks |
| 60 60 60 60 60 60 60 60 60 40 45 40 45 45 45 45 45 45 45 | 1314 Whiffletres Hooks |
| 60 60 60 40 60 60 60 60 40 45 40 45 45 45 45 45 45 45 | 1314 Whiffletres Hooks |
| 60 60 60 60 60 60 60 60 45 45 45 45 45 45 45 45 45 45 45 | 1314 Whiffletres Hooks |
| 60 40 60 60 60 60 60 60 | ## 1814 Whiffletres Hooks |
| .60 .40 .60 .60 .60 .60 .40 .40 .45 .45 .45 .80 .40 .40 .45 .45 .80 .40 .40 .40 .45 .45 .45 .45 .45 .45 .45 .45 .45 .45 | ## 1814 Whiffletres Hooks |
| .60 .40 .60 .60 .60 .60 .60 .60 .40 .40 .45 .45 .45 .45 .45 .45 .45 .45 .45 .45 | ## 1315, Horse Nails. Change list, No. 4, \$0.50. \$19, Electric Hay Knife |
| .60 .40 .60 .60 .60 .45 .45 .45 .45 .85 .85 .85 .85 .85 .60 .45 .85 .85 .85 .85 .85 .85 .85 .85 .85 .8 | ## 1315, Horse Nails. Change list, No. 4, \$0.50. \$19, Electric Hay Knife |
| .60 .40 .60 .60 .40 .60 .60 .60 .40 .45 .40 .45 .45 .80 .40 .40 .40 .40 .40 .40 .40 .40 .40 .4 | ## 1315, Horse Nails. Change list, No. 4, \$0.50. \$19, Electric Hay Knife |
| .60 .40 .60 .60 .60 .60 .60 .60 .40 .45 .45 .45 .45 .45 .45 .45 .45 .45 .45 | ## 1315, Horse Nails. Change list, No. 4, \$0.50. \$19, Electric Hay Knife |
| .60 .60 .60 .60 .60 .60 .60 .60 .40 .45 .50 .50 .83 .55 .83 .55 .83 .55 .83 .55 .83 .60 .60 .60 .60 .60 .60 .60 .60 .60 .60 | ## 1315, Horse Nails. Change list, No. 4, \$0.50. \$19, Electric Hay Knife |
| 60 60 60 60 60 60 60 40 4 | 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| .60 .60 .60 .60 .40 .60 .60 .60 .40 .40 .45 .50 .45 .45 .45 .45 .80 .45 .80 .45 .80 .60 .60 .60 .60 .60 .60 .60 .60 .60 .6 | 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| .60 .60 .60 .60 .40 .60 .60 .60 .60 .40 .45 .45 .45 .45 .45 .45 .80 .40 .40 .45 .45 .45 .45 .45 .45 .45 .45 .45 .45 | 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| 60 60 60 60 60 60 60 60 | 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| 60 60 60 60 60 60 60 60 | 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| .50 .60 .60 .60 .60 .60 .60 .60 .60 .45 .45 .45 .45 .45 .80 .80 .80 .80 .80 .80 .80 .80 .80 .80 | 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| .60 .40 .60 .60 .60 .40 .45 .45 .85 .85 .80 .60 .60 .60 .60 .60 .40 .40 .45 .45 .45 .55 .55 .85 .85 .85 .85 .85 .85 .85 .8 | 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| .60 .40 .60 .60 .60 .40 .45 .45 .85 .85 .80 .60 .60 .60 .60 .60 .40 .40 .45 .45 .45 .55 .55 .85 .85 .85 .85 .85 .85 .85 .8 | 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| .60 .60 .60 .60 .60 .40 .40 .45 .45 .45 .45 .45 .45 .45 .45 .45 .45 | 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| .60 .60 .60 .60 .60 .40 .40 .45 .45 .45 .45 .45 .45 .45 .45 .45 .45 | 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| .60 .40 .60 .60 .60 .40 .45 .55 .55 .85 .80 .45 .45 .45 .45 .45 .45 .45 .45 .45 .45 | 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| .60 .60 .60 .60 .60 .85 .85 .80 .60 .60 .60 .80 .80 .80 .80 .80 .80 .80 .80 .80 .8 | 315, Horse Nails. Change list, No. 4, \$0.50. 319, Electric Hay Knife |
| .60 .60 .60 .60 .60 .60 .60 .60 .60 .60 | ## 1315, Horse Nails. Change list, No. 4, \$0.50. \$19, Electric Hay Knife |
| .60 .60 .60 .60 .60 .60 .60 .60 .60 .60 | ## 1315, Horse Nails. Change list, No. 4, \$0.50. \$19, Electric Hay Knife |
| .60 .60 .60 .60 .60 .60 .60 .60 .60 .40 .40 .40 .40 .40 .40 .40 .40 .40 .4 | ## 1315, Horse Nails. Change list, No. 4, \$0.50. \$19, Electric Hay Knife |
| .50 .60 .60 .60 .60 .60 .60 .60 .60 .60 .6 | ## 1315, Horse Nails. Change list, No. 4, \$0.50. \$19, Electric Hay Knife |
| .50 .60 .60 .60 .60 .60 .60 .60 .60 .40 .40 .40 .40 .40 .40 .40 .40 .40 .4 | ## 1315, Horse Nails. Change list, No. 4, \$0.50. \$19, Electric Hay Knife |
| .60 .60 .60 .60 .60 .60 .60 .60 .60 .60 | 1314, Whiffletres Hooks |
| .60 .60 .60 .60 .60 .60 .60 .60 .60 .60 | 1314, Whiffletres Hooks |
| .60 .60 .60 .60 .60 .60 .60 .60 .60 .60 | 1314, Whiffletres Hooks |
| .60 .60 .60 .60 .60 .60 .60 .60 .60 .60 | 1314, Whiffletres Hooks |
| .60 .60 .60 .60 .60 .60 .60 .60 .60 .60 | ## 1315, Horse Nails. Change list, No. 4, \$0.50. \$19, Electric Hay Knife |

| .45 | Cancel pages 825-835, and see revised list on |
|----------|---|
| 40 | Cancel pages 325-335, and see revised list on page 325 new. |
| 35 | New 825, Bright Iron and Brass Wire Goods, |
| .50 | &c75& |
| 45 | New 826, Hammock Hooks |
| 45 | 886, Hitching and Hammock Rings |
| 45 | New 326, Hammock Hooks |
| 11/6 | 337, Wrought Hinge Nails |
| et 80 | 838, Lamp Hooks, Plain |
| 40 | 1 Polished and Burnished |
| 25 | 339, Cast Brass Screw, Acorn, Looking Glass and Picture Hooks, Plain Finish. 393, Cast Brass Servey, Acorn, Looking Glass and Picture Hooks, Pollahed and Burnlabed. |
| 55 | Picture Hooks, Plain Finish |
| 85 | 399, Cast Brass Serew; Acorn; Looking Glass and |
| 30 | Picture Hooks; Polished and Burnished |
| 45 | \$10, Cast Brass Cup Hooks, Plain Finish |
| 80 | 341 Screw Hooks |
| 60 | 842, 14 1. |
| 60 | 342, Cup " |
| 60 | 1 342 Shade Pulleva |
| 60 | 343, Screw 343, Brass Screw Pulleys. |
| 45 | 343, Brass Screw Pulleys |
| 40 | 343, Double Side ** |
| 50 55 | 843 Unright Pulley |
| 60 | 343, Upright Pulley |
| 60 | Line Cleats. No. 1N |
| 50 | Lane Cleats, No. 1 |
| 20 | 844, N. Y. Pattern Shutter Bar 60& |
| 15 | 344, Boston " " |
| 85 | 340, Plated Plate Escutcheons |
| 40 50 | 345, Porcelain Plate "Shutter Knobs |
| 40 | 346, "Shutter Knobs |
| 25 | |
| 85 | 347, Drawer Knobs, No. 5 |
| 40 | |
| 25 | District (apprend accounty |
| 30 | 349-365, Richard's Patent Picture Nails |
| 45 | Change list: No. 3, \$2.80; No. 9, \$2.80; No. 51, \$4; No. 52, \$4; No. 53, \$4; No. 56, \$4; No. 59, \$4. |
| 80 | 51, \$4; No. 52, \$4; No. 53, \$4; No. 50, \$4; |
| 40 | |
| 50 | 866, Brass Cap Picture Nails |
| 15 | 866, Silver " " " |
| 15 | 307, Richard's Patent Screw Supports |
| 25 | Polished Plain " " |
| 80 | MR Cast Brass 44 44 |
| 55 40 | 363, Porcelain Picture Knobs (Flat Head)60&: |
| 40 | ass. " (Round Head) |
| 20 | 870, Tassel Hooks |
| 25 | 371, Richard's Rack Pulleys |
| 10 | 572, Shade Brackets |
| 25 35 | 873. Carriage Bolts |
| 10 | 874, Tire Bolts |
| 85 | |
| 10 | 875–378, Rivets in Papers, (new list) |
| 100 | 877, Rivets in Bulk, (new list) |
| 36 | 878 Plack Swede Iron Ruppa 10 10 |
| 15 | 378. Copper Rivets and Burrs. " " |
| 35 | 378, Black Swede Iron Burrs, " 378, Copper Rivets and Burrs, " Cuncel pages 379 to 385 and see new pages." |
| 15 | * 379, American Iron Cut Tacks |
| 10 | - O(17) |
| 10 | * 379, American and Swedes Iron Tinned Tacks 3 |
| 10 | * 379, American and Swedes Iron Tinned Tacks 3 |
| 5 | * 379, American and Swedes from Lut and Upholsterers' Tacks. 8 * 380, Copper Tacks. |
| 100 | * 380, Large Head Carpet Tacks, Swedes Iron |
| 50 | *390. Large Head Carpet Tacks, Swedes Iron. *380. Large Head Carpet Tacks, American Iron. *860. Loather Head Carpet Tacks. *390. Swedes Tinned Large Head Carpet Tacks. *390. Looting Glass Tacks. *391. Gimp and Lace Tacks, Swedes Iron Plain. *381. Gimp and Lace Tacks, Swedes Iron Tinned. *881. Large Head Miner's Tacks. *881. Swedes Iron Tacks in Bulk |
| 15 | * 880, Leather Head Carpet Tacks |
| 10 | * 380, Swedes Tinned Large Head Carpet Tacks .a |
| 10 | # 3kt Gimp and Lace Tacks, Swedes Iron Plain, 3 |
| 10 | * 281. Gimp and Lace Tacks, Swedes Iron Tinned. 8 |
| 0 | * 881, Large Head Miner's Tacks |
| 0 | |
| 15 | * 381. " Tinned Tacks in Bulk |
| de l | * 381. '' Tinned Tacks in Bulk |
| 15 | e 381 Backet Nails |
| 5 | * 381, Basket Nails. Tinned |
| 5 | * 382, Chair Nails |
| 0 | 381, Basket Nalls. 3 382, Round Head Hungarian Nalls. 3 382, Round Head Hungarian Nalls. 3 382, Cigar Box Nalls 3 382, Finishing 3 383, Trunk 3 3 3 3 3 3 3 3 3 |
| 10 | * 382, Finishing " |
| 10 | * 383, Clout ** |
| | * % Common and Pat Brads |
| 0 | ** 383, Truns *** 388, Clout *** 388, Common and Pat. Brads *** 383, Common and Pat. Brads *** 383, Srush Tacks and Glasiers' Points *** 383, Shoe Nalis, Shoe Tacks, &c Ne *** 384, Pages 386 to 335 (discarded). *** 386, Sash Cord. *** 387, Sash, Villes' Patent Coat and Hat and Celling Hooks. |
| 8 | * 353, Shoe Nails, Shoe Tacks, &c |
| 8 | * 384, Pages 386 to 395 (discarded). |
| 0 | * 396, Sash Cord |
| 0 | 897-399, Miles' Patent Coat and Hat and Celling Hooks. 400, Martin's Patent Casters |
| 0 | 400 Martin's Patent Casters 891 |
| 0 | 402-404, Padlocks, |
| 5 | 405-414, " |
| 5 | 415, 418, 44 |
| ő | 419, |
| 5 | 419, Lanterns, Pocket |
| 5 | 405-414, 415-418, 419, 418, 419, 419, 419, 419, 419, 419, 419, 419 |
| 0 | Lamps 1614, \$90; 31, \$91; 82, \$21 |
| 5 | 490, 490 Tooley Wor O to 01 |
| | 400-406, 120CEB, 110B. 0 00 01 |
| 0 | 419, Change List: Lamps. 1614, \$20; 31, \$21; 32, \$21 420-422, Locks, Nos. 0 to 91 |

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.65&10

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|---|--------------|--------|-----|---------|-------|-----|-----|--------|-----|-----|-----|-----|-----|-----|------|----------|
| 50, Crayons and | Chall | £ | | | | | | 0 0 | | | | | | | • • | N |
| 51, Door Hanger | M | | | | . 4 | | | | b 0 | 0 | | | | | | |
| 52. Farm and Sc | hool . | Belli | 1 | 000 | | 0 | 0 0 | 0 1 | 0 | 0 1 | 0 0 | | | 0 1 | | |
| 52. Church Bells | | | | | | 0 | 0 0 | 0 1 | | | = 0 | 0 | 0 | 0 0 | | 88 |
| 59. Double Point | ed Ta | cks. | | | | 4 | | | | | 0 0 | 0 | 0 | | | 11 |
| 58 Rasket and S | oop 8 | itap | les | | | | 0 1 | | | | | | | | | N |
| 59 Steel Spring | Stank | M. | | | | | | | | | | | | | | |
| 58, Electrician | 0.6 | | | | | | | | | | | | | | | |
| 59, Blind | 66 | | | | | | | | | | | Ĺ | | | | |
| 59, Blind 58, Bed Spring | 6.6 | | | | | | | | | | | | | | | |
| 54. Pruning Shee | 190 | | | | | | | | | | | • | ۰ | | | |
| 55. " " " " " " " " " " " " " " " " " " | 4A 19+ + + - | | | | | | | | | | | ۰ | ٠ | | | |
| 55. Rockdale Pri | 171.00 | | | | | 0 1 | 4 0 | 0 1 | 0 | | | | | • • | | × |
| 55, Grape Picker | ALLOI . | | | 0 0 | 0 0 . | | 0 0 | | 0 0 | 0 | 0 1 | | ۰ | | | n |
| 56, Wire Nail | | | | | | | | 0 | 0 0 | | 0 1 | | ۰ | 0 | | á's |
| 56, Wire Nam 57. Steel Escutch | vers Y | Money | | | | . 6 | 0 0 | 0 4 | 0 | 0 6 | 0 | 0 | 0 1 | 0 0 | | OK GH |
| 57, Steel Escutci | leon l | ins. | 14 | - 01 | | | | | | - 1 | | 0 | 0 | | - 45 | O. |
| 67. Finishing and | 1 MOI | amg | N | aı. | 18. | | | 0 0 | 0 | | | 0 | | | .1 | 060 |
| 58, Fly Traps | | | | | | 0 | | , | | 0 0 | | 0 | | 0 | | |
| 58, Corn Popper | | | | 0.0 | | | | | 0 | 0 0 | | 0 | | 0 | 0 | |
| 58, Dish Covers . | | | | | | | | | | | | | | | | - 1 |
| 59, Spool Wire | | | | | | | | | | | | ٠ | | | 0. | |
| 59. Dog Muzzles. | | | | | | | | | | | | | | | | |
| 59, Rat Traps | | | | | | | | | | | | | | | . ! | 83 |
| 59, Hunter's Sift | ers | | | | | | | | | | | | | | | 83 |
| 59. Horse and Oa | Muz | zles | | | | | | | | | | | | | | |
| 59, Mouse Traps | | | | | | | | | | | | | | | | 83 |
| 80. Rat Traps | | | | | | | | | | | | • | | | | R |
| 60. Whip Socket. | | | | | | | | | | | | | | | | _ |
| 61. King and Que | on Co | PERMIT | . 6 | Lucia . | 00 | 200 | - | Page 1 | | | | 0 | | | 3 | e i |
| 62. Corner Irons | oud 6 | h ald | CI. | 7 44 | 00 | F, | 60 | 0 | - | | 0 | 0 1 | | | . 4 | N. |
| 68, Shovels, | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

THE EAGLE LOCK COMPANY,

Terryville, Conn., and 98 Chambers street, New York, have been putting a number of which occupies page 20. Among the goods there represented is the Eureka Padlock, which is made in the seven sizes shown, from 11/2 inch to 21/4 inch. This lock, it will be perceived, is a new departure in the shape of the lock and the shackle and the working of the lock and shackle. It is made with flat steel keys, is self-locking, and has a spring shackle that flies open when unlocked by the key. They are neatly made, japanned, and put on the market to take the place of the old style and medium-priced locks. The list is as follows, subject to the regular discount of 25 per cent. :

4625, 2 " all to differ ... 4025, 214 " all to differ ...

The same manufacturers are also putting on the market a line of entirely new Mortise Flat Key Drawer Locks. The key guide is made adjustable for different thicknesses of wood from 1/2 inch to 11/2 inch. The method of construction brings the end of the key guide flush with the escutcheon on the wood, a point which will be appreciated by the They are also making new styles and designs of Keys, flat steel and fine metal, as well as common iron Keys. They call attention to their assortment in this line as the largest in the market. Within a short time they have also commenced making a thus avoiding the disfiguring of paint or Wrought Brass and a Wrought Steel Trunk Lock of the style of the well-known Excelsior Trunk Lock, which has heretofore been made of cast brass and bronze metal. They are able to offer this new article at a reduced price. A line of Brass Gilt Finished Fancy Railing for fine furniture, such as sideboards, cabinets, &c , is being introduced by this company, and will be sold especially to furniture manufacturers and dealers in Furniture Hardware.

A. J. JORDAN.

The following communication from Friedmann & Lauterjung, or Chambers street, New York, will be of interest to our readers as announcing a change which they have made in regard to their St. Louis business, the exclusive sale of their goods in the territory indicated being placed in the hands of A. J. Jordan, who has been their sole agent for a number of years, and is widely known in the

NEW YORK, July 28, 1884.

To the Editor of the Iron Age: We beg leave to inform our customers and the trade in general that we have sold to Mr. A. J. Jordan all the interest we held in the whole-sale Cutlery house at St. Louis, Mo., heretofore conducted under the firm name of Friedmann & Lauterjung—A. J. Jordan, sole agent. Mr. Jordan still has the exclusive sale of our goods, including our well-known Electric brands, in the territory he has heretofore controlled, and orders for same should be addressed to him and will receive prompt attention. Thanking our customers for their past patronage, we trust the same will be continued toward Mr.

MISCELLANEOUS PRICES.

sent us his descriptive price list of Mortise of clearness. We do not know of any cata Door Bolts, a line of goods of which he logue in which as large an assortment of makes a specialty. It shows 23 styles of goods is displayed in the same space with so these Bolts, of different patterns to match much skill and taste. The numbers which various styles of door trimmings. The discount on these goods, as sold by John H. all cases printed in a black-faced letter Graham & Co., his agents, is 55 and 10 and which gives a suitable prominence and adds 10 per cent., which will be recognized by to the convenience of consulting the catathe trade as a low figure on a line which is logue. Special pains have also been taken to received with much favor.

The Athol Machine Company, Athol, Mass., the following discount sheet, from which it rangement is sometimes dispensed with, as will be seen that a material reduction is the cuts are interlocked or overlapped. An made in the price of some of their goods. instance of this may be found on page 790, They report trade as having been quiet for in the display of the Williams Manufacturing the past two or three months, but as now Company's Reamers, or Stearn's Saw Vises, follows, an additional 2 per cent. being given leading sizes, is given very attractively for cash in 10 days, or net 60 days:

| American Moat Choppers |
|--|
| |
| Visca. |
| Simpson's Viscs40 |
| Amateur's Vises |
| Farmer's Vises |
| Standard Vises40 |
| Woodworker's Visca, |
| Carpenter's Vises |
| Woodworker's Post Vises |
| Delivered on cars at factory. |
| In their advertisement on page 8 John H. |

Graham & Co., 113 Chambers street, New to specify further illustrations of what is a York, call attention to their Universal Corn characteristic of the book as a whole. Its

Husker, an illustration of which is there index, we may mention, is very full and satgiven. This article is made entirely of isfactory, as the goods are so freely indexed web or set screws, and is spoken of as meeting the demands of the trade and finding a is very creditable to the house which issues large sale. It is made of only one size, it, will be highly appreciated by the trade, will fit any hand. It is sold at \$24 per gross. the arrangement and character of catalogues subject to a discount of 25 per cent.; in lots | Issued by other houses. It is now, we beof five gross a discount of 30 per cent. is lieve, ready for delivery, and will be sent to given.

FRANCIS AXE COMPANY.

On page 16 our readers cannot fail to observe the striking advertisement of the Francis Axe Company, Buffalo, N. Y., who their new catalogue, the following Discount are represented in this city by T. P. Burke, 100 Chambers street. These manufacturers, we are informed, have one of the most completely equipped Axe factories in the country, and as all their machinery is new and made expressly to their order, they have the best facilities for turning out the goods that are required by their extensive trade. They inform us new goods on the market, some of which that they do not undertake to compete with are represented in their advertisement inferior makers, but will furnish a highgrade tool at a fair price. They are intending to make a specialty of All Steel All Polished Axes, which they mention that they are putting on the market at very favorable figures. In addition to the patterns illustrated, they make Double Bitted Axes, Wedge, Peeling, and Fireman's, and are in a position to make to order any desired ITEMS.

On page 45 will be found the advertisement of the Follett Lantern and Manufacturing Company, Rochester, N. Y., a description of whose lantern we published in Hardware Novelties a few weeks ago. These manufacturers report trade for this article as very satisfactory, and mention their facilities for making it and their other goods, having new patents and improved machinery. They direct attention also to the Follett Lantern Dashboard Reflector, an article which is meeting with favor. They lay special emphasis on the workmanship and finish of their goods.

Neumeyer's Excelsior Window Bead Fastener, which is made under patent dated March 4, 1884, by Brobst & Neumeyer, Macungie, Pa., is illustrated in their advertisement on page 40. The object of this Fastener is to secure window beads to the casing in such a way that they can be removed, replaced and fastened readily, bead when fastening or taking off. By the aid of the illustration in the advertisement the operation of this simple fastening will be readily understood.

We are advised that Davis W. Shuler manufacturer of Steel Springs, Amsterdam, New York, has appointed W. Dodman, 107 Chambers street, as direct representative, who will at all times have the extreme factory prices and terms. We have also received Mr. Shuler's catalogue showing the variety of Springs manufactured, and a circular calling attention to the Shuler Cross Springs.

On page 23, Yerkes & Plumb again direct the trade's attention to their line of goods,

illustrating some importan styles. SARGENT & CO. Sargent & Co., New York and New Haven, have ready for delivery their new illustrated Catalogue of Hardware, a book of exceptional excellence, which will be highly valued by the trade. It is an imposing volume of a somewhat larger page than their last, tastily bound with brown cloth sides, leather back and red edges, finely printed and fully illustrated. The book is not bulky, but of convenient size for practical use, and is remarkable for the satisfactory manner in which it represents compactly, clearly and with artistic effect the large variety of goods which it covers. More than half of the volume, about 600 pages, is occupied with the very extensive line of which Sargent & Co. are the manufacturers, exhibiting their latest additions. Turning to the latter part of Respectfully, yours, latest additions. Turning to the latter part of FRIEDMANN & LAUTERJUNG. the volume, which is devoted to the display of General Hardware, we are in the compactness with which the illustra-Hobart B. Ives, New Haven, Conn., has tions and lists are given without any sacrifice secure a harmonious effect in grouping the cuts, and without interfering with the illusunder date of August 1, 1884, have issued tration of the goods the usually stiff arning satisfactorily, with good promise of page 810. The list for Wire Nails and Es fair business. The discount sheet is as cutcheon Pins, with a cut full size of the ys: on page 703. The arrangement of Dis. per cent, Disston's Hand Panel and Rip Saws is satisfactory, giving, as it does, in an exceedingly condensed form the cut, description and price of each line. By this arrangement, for example, Nos. 12, 9, 8, 7, D8 and 76 are fully represented with illustrations on a single page. The display of Squares on pages 539, 540 and 541 is another instance of the combination of clearness, condensation and typographical beauty; but it is needless

brass and without leather straps, loose rings, and cross indexed that there is no difficulty in finding a given article. The volume, which which, however, by an adjustable fixture and doubtless be influential in determining customers with the first lot of goods ordered. or, if desired by them, expressed to their address.

Sargent & Co. have also issued, to go with

| | their new catalogue, the following Discour Sheet, which is subject to an additional dis | |
|-------------|---|----------|
| | count of 10 per cent. for prompt cash: | . 4 |
| | No. 90, Fast Joint Butts | 10 |
| | No. 152, " | 50 |
| ı | No. 156, " " " No. 158 and 159 Loose Joint Butts | 80 |
| | No. 156, Nos. 158 and 159, Loose Joint Butts. No. 488, Boston Finish Butts. No. 472, Berlin Bronzed Butts. | 5 |
| | NO. 440, | 10 |
| | Nos. 896, 899, Bronze Butts | 10 |
| | Nos. 895, 898, Bronze Butts | 80 |
| | No. 898, Bronze Metal Butts | 80 |
| | No. 473. " " " " " " " " " " " " " " " " " " " | 80 |
| | No. 1804, " | 36 86 |
| | Loose Pin Butts, Nos. 48, 48, 46 | 30 30 |
| | No. 82, Loose Pin Butts. | 00 75 |
| | Loose Pin Butts, Nos. 235, 485 | 70 70 |
| | Nos. 886, 889 | 10 |
| | No. 886, Bronze Cap Butta | 50 |
| | Mayer's Hinges | 00 |
| | Parliament Butts | so. |
| ı | Pin Hinges 5 L. P. Surface Butts 6 Refrigerator Hinges 5 Surface Spring Hinges 6 | 90 |
| İ | | |
| I | Mortise | 00 |
| l | Victor Door Springs | 0 |
| l | | - |
| Į | Rubber Door Springs | 2 |
| ı | Crate Hinges | 2 2 2 |
| I | S Door Springs | 0 |
| l | No. 100, Fast Joint Plate Hinges | t |
| l | 14 inches and larger. 4.70 | |
| I | No. 162, Loose Joint Plate Hinges. Ne 6, 8, 10 and 10 inches, ≥ 100 | t |
| l | 14 inches and larger, " 4.75 No. 188, Hook Hinges | 6 |
| l | No. 108, Hook Hinges | |
| l | No. 79, Welded Hook Hinges | 0 |
| l | No. 98, Hook Hinges | t |
| l | 14 inches and larger, 44 | |
| ١ | No. 88, Hook and Eye Hinges | 0 |
| | Rolled Center Blind Hinges | |
| l | Blind Hinges, Nos. 1, 8, 5 | 5 |
| ļ | Wrought Turn Buckles | |
| | Wrought Tura Buckies | 0 |
| | Reversible Gate Hinges | 3 |
| | Reversible N. E. Gate Hinges 50&10 N. E. Gate Hinges 50&10 Western Gate Hinges 50&10 Japanned 50&216 Self-Lock 50&216 American 50&10 Gate Sockets 50&10 Gate Sockets 50&10 Gate Latches 50&10 No. 0, Gate Laches 40 No. 0, Co. 40 No. 65, Wrought Gate Latches 40 Barn Door Rollers 60&10 Barn Hangers 60 | 3 |
| | Japanned | |
| | American " 50&10 | |
| | Sate Latches | |
| | No. 15, " 40 No. 65, Wrought Gate Latches 40 | |
| | Barn Door Rollers | |
| 1 | Barn boor Rollers 90210 Barn 'Hangers 50 Wood Track B. D. Hangers 60 Wood Track B. D. Hangers 60 N. E. Barn Door 90210 Sterling Barn Door 95 Barn Boor Stays 90 Barn Rail, Nos. 2 to 14 60 Barn Boor Rail, Nos. 24 to 47 90 " Bottom Rail 90 Sliding Door Rail 90 Sarrel 90 Wrought Barrel Boits 90 Wrought Barrel Boits 90 April 90 Wrought Barrel Boits 90 April 90 Wrought Barrel Boits 90 April 90 | |
| 1 | Sterling Barn Door " | 1 |
| 1 | Barn Boor Rail, Nos. 2 to 14 | |
| 2 700 | Silding Door Rail | |
| 1 | Sarrel 10 | |
| 1 | Aight " No 871 60 | 1 |
| î | Jarrel Bolts | |
| 1 | 1 | 1 |
| 200 | 10, 428, 1 90 10, 428, 1 90 10, 528, 1 90 10, 528, 1 90 10, 528, 540, Neck Bolts 60&10 10, 316, Wrought Spring Bolts 60&10 10, 316, Wrought Spring Bolts 60&10 10, 316, Wrought Spring Bolts 60&10 10, 300. 1 90, | 1 |
| 1 | tos. 325, 535, Neck Bolts | 1 |
| 1 | Vrought Spring Bolts | 1 |
| ä | None Thates for Conone Dalta | 1 |
| (| ast Brass Square Bolts | l |
| 9 | 100 | 1 |
| 7 | o. 337, Shutter Bolts (add new size 4-inch, per doz., \$2.50) | |
| Sec. 1257 | [0, 888, Shutter Bolts | 1 |
| Tiplin. | dox, \$25.90 | 1 |
| ĺ | oot 15 | 1 |
| Ä | ortise Door Bolts | 1 |
| É | hip Flush Boits. 60 Prass and Plated Flush Blots. 60 Vrought Flush Boits. 60 | 8 |
| E | ronzed Flush Bolts, Nos. 94, 97 (change the first size of No. 94 to 6-inch instead of 9-inch)60 | 8 |
| E | size of No. 94 to 6-inch instead of 9-inch)60 M. and Imperial Flush Bolts | 7 |
| S N | ortise Flush Bolts | 1 |
| d C P | i. M. and Imperial Flush Bolts 60 fronze Metal Flush Bolts 65 fortise Flush Bolts 65 upboard Bolts 60 rass Flat 60 oor Buttons 60 upboard Latches 60% " Catches 60% 60 60 | |
| | oor Buttons | I |
| - | " Catches | 170 1941 |
| B | Catches 60 Or Locker Catches 60 Blow Catches 60 arn Door Elbow Catches 60 | I |
| B | rass and Plated Cupboard Catches60 | 000 |
| | how Case Catches 60 ush Ring Blow Case Catches 60 how Case Catches, Nos. 21, 23 60 ural Cupboard Catches 60 | 0 |
| d H | now Case Catches, Nos. 21, 25 | E |
| | ananned M | |
| O | apanned | E |
| OFT | 1900at 1 | E |

for Door Bells

| | House Bells on Carriages | 45 1 |
|------------|--|----------------------------|
| , | House Bells on Carriages. Alarm Door Bells | 65 60 |
| 1 | Bell Cranks Mortise Bell Cranks | 55 H |
| | Roggin's Latches 60& Bronzed Door Handles | 55 N 10 H 65 N |
| | Japanned Door Handles Barn Door Latches | 60 (|
| | Japanned Door Handles Barn Door Latches Barn Door Latches Barn Door Hasp and Latch Japanned Store Door Handles Bronzed Store Door Handles Bronzed Store Door Handles Store Door Pulls Door Pulls Door Pulls Door Pulls Drawer Pulls Drawer Pulls Drawer Handles Drawer Handles Drawer Handles Drawer Handles Japanned Lifting Handles | 10 60 10 I |
| | Store Door Handles 50& Bronze Metal Store Door Handles 50& | 10 I |
| | Flush Barn Door Pulls. Door Pulls. | 10 7 60 7 60 7 |
| ı | Push Plates. Drawer Pulls. 66 | 60 T 60 N |
| | Japanned Lifting Handles. | 60 N 60 S 55 C |
| | Drop Handles and Escutcheons Japanned Lifting Handles Lifting Handles Brass Ring Handles No. 25, Shelf Box Handles No. 10, Brass Drawer No. 15, Brass Trunk No. 30, Brass Trunk No. 30, Brass Flush Drawer Handles Flush Rings Brass Flush Drawer Handles Trap Door Rings Chest Handles 66 | 65 8 65 N |
| | No. 15, Brass Trunk No. 20, "1" "1" | 80 P |
| | Flush Rings 66 Brass Flush Drawer Handles 66 Flush Chest Handles | 96 8 85 P 80 N |
| | Trap Door Rings. Chest Handles. 66 | 80 E |
| | Chest Handles | 80 S |
| | Wrought Chest Handles: Nos. 71 to 76 | 36 |
| | Wrought Chest Handles: Nos. 71 to 76 | 10 S |
| | Clothes Line Hooks or Cleats | 55 S |
| | Hat Rack Hooks Or Cleats Store Rack Hooks 60& Harness or Baggage Hooks 60& Harness Hooks 60& Hotel Hooks 60& Coat and Hat Hooks 60& Wardrobe Hooks 60& Japanned Screw Hat Hooks 6 Erass Hat Hooks 6 Elling Hooks 6 | 55 C 10 S 10 A |
| | Harness Hooks 60% Hotel Hooks 60% | 0 P |
| | Wardrobe Hooks. 9082 Japanned Screw Hat Hooks. | 10 10 10 10 10 |
| | Brass Hat Hooks Ceiling Hooks Chandeller Hooks | 80 A 80 E |
| | Celling Hooks Celling Hooks Chandeller Hooks Soc Chandeller Hooks Soc Soc Lamp Hooks Soc Brases Screw Hooks Soc Brases Screw Hooks Soc Wire Drive Celling Celling Hooks Soc | O P |
| | Wire Drive Brass 6 No. 405 | 0 In |
| | Brush or Duster Hooks. Coppered Screw " | 0 A |
| | Wire Drive Brass Brush or Duster Hooks Coppered Screw Picture or Mirror Cup Hooks Hooks and Eyes Cabin Door Hooks | 0 P 0 A 0 B |
| | Hooks and Eyes. Cabin Door Hooks (No. 100, Safety Gate Hooks Gate Hooks and Eyes, Nos. 40, 1040. Cornice Hooks, Nos. 30, 35 Plates for Cornice Hooks. Stair Rod Eyes. Bird Cage Screw Eyes. 'Hooks. 'Books. 'B | 0 N 5 S |
| 1 | Cornice Hooks, Nos. 30, 35 Plates for Cornice Hooks | 5 N |
| | Stair Rod Eyes. | 5 |
| I | " Hooks | 5 B |
| I | Wire Cup Hooks. 7 Beft Hooks 7 | 5 M 5 A 5 D |
| I | Beft Hooks 7 Wire 8 Hooks 5 Rolle Ends 5 Shade Brokets 5 | 0 P |
| I | Shade Brackets | 5 D |
| l | | |
| I | Drawer Knobs, Nos. 5 and 7 6 Stove No. 8 6 | 0 B |
| ı | Shutter Knobs. 50&1 Sash 682 | 0 0 So 4 W |
| l | Kettle Sash Lifts. 669 | 0 Co |
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| l | Porcelain Head Picture Nails. | BI |
| l | Brass Window Bolts | |
| | Fasteners 60&10 Transom Lifters 20&10 | 0 80 0 Gr 0 Be |
| | Sast Centers. 663 Shutter Screws. 6 Lifts. 66 | Se Se |
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| | Transom Lifters 30&1 Sash Centers 66% Shutter Screws 66 "Lifts 6 Stubs and Plates 56% Sash Rollers 90% Shutter Sheaves 6 Hatfield Pattern Sheaves 6 Sliding Door Stops 90% Elastic Base Knobs, Wood 66% "Iron 6 Sash-Cord Irons 5 Axle Pulleys 50 | Ja Ca |
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| | Sash-Cord Irons. 50 Axle Pulleys. 50 Dumb-Waiter Pulleys. 65 Ceiling Pulleys. 65 Hot-House Pulleys. 55 Upright Pulleys. 65 Side Pulleys. 65 Sprew Pulleys. 65 Sprew Pulleys. 65 Swivel 65 Tackle, or Awning Pulleys. 60 Tackle, or Awning Pulleys. 65 Well Wheels. 60 Hay Fork Pulleys. 65 Brass Side Pulleys. 70 | Sto Pia Ch |
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| | 55 Hanging Basket or B. C. Hooks | 6 |
| 18:1 | 55 Match Safes | 60 |
| 6 | File Hooks | 60&: |
| 181 | Garden Trowels | 6 |
| | Hooks. | 6 |
| 130 | 10 Ice Awis | |
| 136 | 0 Tack Claws | 60&10 |
| 6 | 70 Tack Hammers (except No. 32) | 60 |
| 669 | No. 32 Tack Hammers | 50& |
| 0 | Magnetic Tack Hammers | 60 |
| 6 | 0 Sad Iron Stands | 50 |
| 6 | 8 Sargent-Sprague Can Openers | 50 |
| 6 | | |
| 6 | 0 Paste Jaggers. 0 Mop Heads. | |
| 669 | 0 Mop Heads. Sausage Stuffers, Nos. 22 and 24. Perry Sausage Stuffers. Meat Cutters, Nos. 32 and 33. Hale Meat Cutters. | 30 |
| . 6 | 0 Meat Cutters, Nos. 32 and 33 0 Hale Meat Cutters | 60 |
| 663 | Tobacco Cutters | 50 |
| 6 | 0 'Gates, Nos. 11 to 34 | 40 |
| | Milk Can Gates | Net |
| 663 663 & 1 | Self-Boring Stebbins' Gates | 6714 |
| &1 | 0 Steel Game Traps | 9914 |
| 6 | 5 Scale Beams | 50 |
| 5 | 5 Chisel Handles. | 50 |
| &1 &1 | 0 Awl Hafts | 50 |
| 8:1 | 0 Brad Awls | 50 |
| 0 | 0 ' Awl Handles 0 Handled Brad Awls | 50 |
| 6 | Scratch Awls | 50 |
| &1 &1 | O Genuine " " " | 50 |
| &1 | Peg Awls. | 50 |
| &10 7 | Iron Shoe Hammers | |
| 5 | O Cast Shingling Hatchets. | 60 |
| . 7 | Plumb Bobs | 60 |
| .7 | | 50 |
| 0 | Bench Hooks | 60 |
| 60 | Nail Sets Steel Rules | 50.69 |
| 71 | | 50&2 |
| 71 | Screw-Drivers : | 50&2 |
| .7 | Nos. 20 and 1. | 55 |
| . 71 | Brass Saw Screws | 60 |
| .71 | Saw Rods | 60 |
| . 71 | American Shears | 70 |
| 70 | Patent Wire Fence Hooks | 60 |
| .50 | Double Pointed Tacks, in papers | 60 |
| .50 | " in bulk | 40 |
| .50 | Flat-Steel Round Crown Staples | 80 |
| . 00 | Barrel or Hoop Staples. | 50 |
| .60 | Barbed Blind Staples | 50 |
| £10 | bed Spring Staples | 60 |
| 654 | Wrought Nail Claws | 60 |
| .60 | | 07 |
| £10 | Box Hooks | 65 |
| | No. 72 Box Chisels. | |
| .00 | Cast-Steel Box Chisels (No. 76 is polished) Cast-Steel Cold | 60 |
| | Carpenter's Pincers | 60 |
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| .00 .60 210 636 636 636 210 .60 | Carpenter's Pincers No. 52, Horse-Shoeing Pincers 62, 63, 12, Hoof Nippers Blacksmiths' Tongs Butterises 9 Drills, Nos. 5, 6, 10 Sockets for Square Shank Drills Grindstone Fixtures | |
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| .00 .60 .636 .636 .636 .60 .50 .60 .60 .60 .60 .60 | Carpenter's Pincers No. 52; Horse-Shoeing Pincers 162; 32; Hoof Nippers. Blacksmiths' Tongs. Butterises Sockets for Square Shank Drills Grindstone Fixtures Bench Vises Swivel-Bench Saw Iron Bench Screws. | |
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| .00 636 636 636 636 636 636 210 .60 .60 .60 .60 | Carpenter's Pincers No. 52; Horse-Shoeing Pincers 162; 32; Hoof Nippers. Blacksmiths' Tongs. Butterises Sockets for Square Shank Drills Grindstone Fixtures Bench Vises Swivel-Bench Saw Iron Bench Screws. | |
| .00 .60 .60 .69 .69 .60 .50 .60 .60 .60 .50 | Carpenter's Pincers No. 52; Horse-Shoeing Pincers . 62; . 32; Horse-Shoeing Pincers . 62; . 32; Hoof Nippers Blacksmiths' Tongs | 60 60 60 60 60 60 60 60 60 60 60 60 60 6 |
| .00 .60 .636 .636 .636 .210 .50 .810 .60 .60 .60 .50 .50 .50 | Carpetter's Pincers No. 52, Horse-Shoeing Pincers . 62, . 32, Horse-Shoeing Pincers . 62, . 32, Hoof Nippers Blacksmiths' Tongs | 60 60 60 60 60 60 60 60 60 60 60 60 60 6 |
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| . 00 . 60 . 60 . 60 . 60 . 60 . 60 . 60 | Carpeter's Pincers No. 32, Horse-Shoeing Pincers 68, 132, Hoof Nippers Blacksmiths' Tongs. 1 Drills, Nos. 5, 6, 10. Sockets for Square Shank Drills Grindstone Fixtures Bench Vises Swivel-Bench 1 Saw 1 Iron Bench Screws Extra Length 1 Clamp Heads. Door Clamps. Jack Screws Carriage Clamps, Change List. Nos. 12 18 14 15 16 17 18 34 7 10 12 16 20 25 Stool Pivots. Plano-Stoo Brews Chair Table Fasteners 1 Leaf Supports Thread Escutcheons Looking-Glass Plates. Veneer Points, Bed Hooks. 1 Keys Bed Steads 1 Screws Veneer Points Bed Hooks. 1 Keys Bed Steads 1 Screws Philadelphia Plate Casters Prench Pattern English 1 Heavy English 1 Deep Socket Round Shallow Socket Casters Plano-Forte Casters Plano-Forte Casters Plano-Forte Tire Casters. | |
| . 00 . 610 . 610 | Carpeter's Pincers No. 32, Horse-Shoeing Pincers 68, 132, Hoof Nippers Blacksmiths' Tongs. 1 Drills, Nos. 5, 6, 10. Sockets for Square Shank Drills Grindstone Fixtures Bench Vises Swivel-Bench 1 Saw 1 Iron Bench Screws Extra Length 1 Clamp Heads. Door Clamps. Jack Screws Carriage Clamps, Change List. Nos. 12 18 14 15 16 17 18 34 7 10 12 16 20 25 Stool Pivots. Plano-Stoo Brews Chair Table Fasteners 1 Leaf Supports Thread Escutcheons Looking-Glass Plates. Veneer Points, Bed Hooks. 1 Keys Bed Steads 1 Screws Veneer Points Bed Hooks. 1 Keys Bed Steads 1 Screws Philadelphia Plate Casters Prench Pattern English 1 Heavy English 1 Deep Socket Round Shallow Socket Casters Plano-Forte Casters Plano-Forte Casters Plano-Forte Tire Casters. | |
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| . 00 . 60 . 60 . 50 . 60 . 60 . 60 . 60 . 60 . 60 . 60 . 6 | Carpetter's Pincers No. 52, Horse-Shoeing Pincers . 62, . 32, Hoof Nippers . Butterises . Drills, Nos. 5, 6, 10. Sockets for Square Shaak Drills . Grindstone Fixtures . Bench Vises . Swivel-Bench Bench Vises . Swivel-Bench Bench Vises . Swivel-Bench Bench Screws . Loan Bench Screws . Extra Length . Clamp Heads . Door Clamps . Jack Screws . Carriage Clamps, Change List . Nos. 12 13 14 15 16 17 18 . Bench Strews . Carriage Clamps, Change List . Nos. 12 13 14 15 16 17 18 . Sold Pivots . Piano-Stoo S rews . Chair . Table Fasteners . Leaf Supports . Thread Eacutcheons . Looking-Glass Plates . Veneer Points . Bed Hooks . Keys . Bedstead Fastenings . Plate Casters . French Pattern . English . Heavy English . Heavy English . Heavy English . Heavy English . Beep Socket . Round Shallow Socket Casters . French Pattern . Bendstead . Bracket-Bed . Store-Truck . Casters . Rubber Tire Truck . Cast-Iron Coal Shovels . "Sifters . Stove-Cover Lafters . Iron . Pokers . Brass-Head . "Socked Fire Irons . Butterises . Butterises . December 10 | 60 60 60 60 60 60 60 60 60 60 60 60 60 6 |
| | Carpetter's Pincers No. 52, Horse-Shoeing Pincers . 62, . 32, Hoof Nippers . Butterises . Drills, Nos. 5, 6, 10. Sockets for Square Shaak Drills . Grindstone Fixtures . Bench Vises . Swivel-Bench Bench Vises . Swivel-Bench Bench Vises . Swivel-Bench Bench Screws . Loan Bench Screws . Extra Length . Clamp Heads . Door Clamps . Jack Screws . Carriage Clamps, Change List . Nos. 12 13 14 15 16 17 18 . Bench Strews . Carriage Clamps, Change List . Nos. 12 13 14 15 16 17 18 . Sold Pivots . Piano-Stoo S rews . Chair . Table Fasteners . Leaf Supports . Thread Eacutcheons . Looking-Glass Plates . Veneer Points . Bed Hooks . Keys . Bedstead Fastenings . Plate Casters . French Pattern . English . Heavy English . Heavy English . Heavy English . Heavy English . Beep Socket . Round Shallow Socket Casters . French Pattern . Bendstead . Bracket-Bed . Store-Truck . Casters . Rubber Tire Truck . Cast-Iron Coal Shovels . "Sifters . Stove-Cover Lafters . Iron . Pokers . Brass-Head . "Socked Fire Irons . Butterises . Butterises . December 10 | 60 60 60 60 60 60 60 60 60 60 60 60 60 6 |
| | Carpetter's Pincers No. 52, Horse-Shoeing Pincers . 62, | 60 60 60 60 60 60 60 60 60 60 60 60 60 6 |
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| | Carpetter's Pincers No. 52, Horse-Shoeing Pincers 62, 32, Hoof Nippers Blacksmiths' Tongs. Butterises Drills, Nos. 5, 6, 10. Sockets for Square Shank Drills Grindstone Fixtures Bench Vises Swivel-Bench ' Saw ' Iron Bench Screws. Extra Length Clamp Heads. Door Clamps Jack Screws Carriage Clamps, Change List. Nos. 12 18 14 15 16 17 18 87 10 19 16 20 25 Cabinet-Makers' Clamps Stool Pivots. Piano-Stoo S rews Chair Table Fasteners. Looking-Glass Plates. Veneer Points, Change Screws Veneer Points, Change Sprinter Clamps Plate Casters French Pattern French Pattern English Heavy English H | 60 60 60 60 60 60 60 60 60 60 60 60 60 6 |
| | Carpetter's Pincers No. 52, Horse-Shoeing Pincers . 62, . 32, Hoof Nippers . Butterises . Drills, Nos. 5, 6, 10. Sockets for Square Shank Drills . Grindstone Fixtures . Bench . Saw . Bench Vises . Swivel-Bench . Saw . Iron . Bench Screws . Extra Length . Clamp Heads . Door Clamps . Jack Screws . Carriage Clamps, Change List . Nos. 12 13 14 15 16 17 18 . 63 7 10 12 16 20 25 . Cabinet-Makers Clamps . Stool Pivots . Plano-Stoo Screws . Chair . Table Fasteners . Leaf Supports . Thread Escutcheons . Looking-Glass Plates . Veneer Pointg . Bed Hooks . Keys . Veneer Points . Bed Screws . Plano-Stoo Screws . Veneer Points . Bed Hooks . Keys . Veneer Points . Bed Hooks . Keys . Hooks . Keys . Plano-Forte . Casters . French Pattern . English . Deep Socket . Runds Shallow Socket Casters . Plano-Forte . Casters . Plano-Forte . Casters . Rubber Tire Casters . Rubber Tire Truck . Caster-Iron Coal Shovels . Wood-Handle . No. 674, Store-Truck Casters . Brass-Head . Wood-Handle . Coal Tongs . Brass-Head . Wood-Handle . Coal Tongs . Brass-Head . Warner's Parlor-Door Hangers . Rara-Door . Bara-Door . | 60 60 60 60 60 60 60 60 60 60 60 60 60 6 |
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| | Carpetter's Pincers No. 32, Horse-Shoeing Pincers . 62, . 32, Hoof Nippers . Butterises . Drills, Nos. 5, 6, 10. Sockets for Square Shank Drills . Grindstone Fixtures . Bench Vises . Swivel-Bench Saw . In In Bench Screws . Extra Length Clamp Heads Door Clamps . Jack Screws . Carriage Clamps, Change List Nos. 12 18 14 15 16 17 18 . Sa 7 10 12 16 20 25 . Stool Pivots . Piano-Stoo S rews . Chair . Table Fasteners . Leaf Supports . Thread Escutcheons . Looking Glass Plates Veneer Points . Bed Hooks . Keys . Bedstead Fastenings . Plate Casters . French Pattern . English . Heavy English . Heavy English . Heavy English . Deep Socket . Rouber Tire Casters . Bedstead . Bracket-Bed . Store-Truck . Cast-Iron Coal Shovels . In Sifters . Stove-Cover Lafters . Iron . Pokors . Brass-Head . Storo-Door Hangers . Steans . Bronzed . Fire Irons . Cottage . Bets . Brand-Door . Victor . Victor . Togs . Barn-Door . Victor . Tire Carters . In Polyman . Steans . | 60 60 60 60 60 60 60 60 60 60 60 60 60 6 |

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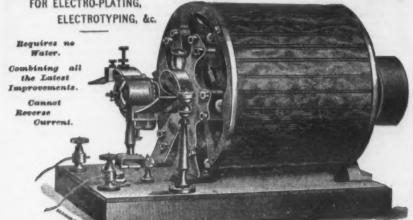
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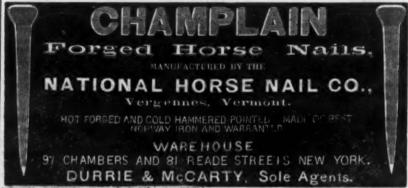
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| Stearns Spokeshaves 28 Stanley Chamfer Spokeshaves 28 Wood Spokeshaves 28 Wood Spokeshaves 28 Wood Spokeshaves 28 Wood Spokeshaves 28 No. 40, Compasses 5 No. 50, Dividers 5 No. 50, Calipers 5 Self-Registering Calipers 5 No. 50, Lever Saw Sets 5 Stallman's Saw Sets 5 Stallman's Saw Sets 5 Leach's 6 Morrill's Perfect Saw Sets 5 Croissant's Keller 6 Disston's Star' 7 No. 15, Hammer 8 No. 10, Bench Hooks 8 Norrill's Perfect Bench Stops 5 Socket Scratch Awls 8 Cigar Box Openers 5 Pilers all numbers 5 Cast Steel Pilers, Nos. 11, 13 No. 51, Side Cutting Pilers 5 No. 75, End Cutting Pilers 16 Button's Pilers 16 Sutton's Pilers 16 Sutton's Pilers 16 Sutton's Pilers 16 Saddlers Funches 40 Saddlers | American and Star S |
| Breast Drills 166 Breast Drills 167 Breast Drills 168 Breast Drills 168 Breast Drills 168 Breast Drills 168 Breast Drill 168 Breast Drill 168 Breast Drill 168 Breast Drill 168 Breast Breast Drill 168 Breast Brea | American and Star S |
| Steaney's Chamfer Spokeshaves | American and Star S |
| Fig Breaks 881 Bonney's Washer Cutters 881 Ring & Smith's Washer Cutters 981 No. 10 Washer Cutters 981 Ames' Shoe Knives 981 | American and Star S |
| Fig Breaks 881 Bonney's Washer Cutters 881 Ring & Smith's Washer Cutters 981 No. 10 Washer Cutters 981 Ames' Shoe Knives 981 | American and Star S |
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| Peg Breaks 83 Bonney's Washer Cutters 83 King & Smith's Washer Cutters 93 No. 10 Washer Cutters 93 Ames' Shoe Knives 93 " Cigar Bread and Kitchen Knives 94 Heel Stiffeners 95 Bonney's Bench Vises 93 " Saw " 95 Stearns' " " Clamps 94 Hammer's Flain Clamps 95 | American and Star S |
| Peg Breaks 83 Bonney's Washer Cutters 83 King & Smith's Washer Cutters 93 No. 10 Washer Cutters 93 Ames' Shoe Knives 93 " Cigar Bread and Kitchen Knives 94 Heel Stiffeners 95 Bonney's Bench Vises 93 " Saw " 95 Stearns' " " Clamps 94 Hammer's Flain Clamps 95 | American and Star S |
| Peg Breaks 83 Bonney's Washer Cutters 83 King & Smith's Washer Cutters 93 No. 10 Washer Cutters 93 Ames' Shoe Knives 93 " Cigar Bread and Kitchen Knives 94 Heel Stiffeners 95 Bonney's Bench Vises 93 " Saw " 95 Stearns' " " Clamps 94 Hammer's Flain Clamps 95 | American and Star S |
| Spring Funcies. Peg Breaks | American and Star S |
| Peg Breaks 83 Bonney's Washer Cutters 83 Bonney's Washer Cutters 85 King & Smith's Washer Cutters 85 No. 10 Washer Cutters 85 Washer Star 85 Washer Star 95 Washer Star 9 | American and Star S |
| Peg Breaks 8. 83 Bonney's Washer Cutters 8. 85 Bonney's Washer Cutters 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. | American and Star S |
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| H.X. Nickeled per pair F.X. Blued. "F.X. Nickeled "F.X. Nickeled "F.X. Polished and Nickeled "G.X. Nickeled "G. | 8.20 |
|--|------------|
| F.A. Blued | 2.80 |
| F-X Polished and Nickalad " | 8.65 |
| G-X. Blued | 8.00 |
| G-X, Nickeled | 8.70 |
| G-X, Polished and Nickeled " | 4.40 |
| Gibson's Ladies' Skates | 11 |
| Shall Figating Payalyana | 95 |
| Rim Fire Cartridges | 50 |
| Center Fire Cartridges | . 208:716 |
| Call Bells, White Finish | 40 |
| Call Palls Nos 259 and 20% | 331/8 |
| Nos 708 to 258 | 9312 |
| " Nos. 71 to 80 | 40 |
| Hand Bells: | |
| Fine Polish. White Metal Ladd's Fine Polish. Pure Bell Metal | 70 |
| White Metal | 6028 |
| Pure Rell Metal | 40 |
| Milkman's Bells. | 25 |
| Silver Chime Hand Bells | 20 |
| Globe Watel Was | 25 |
| Extra Fine | 20 |
| Gong Door Bells : | |
| Abbe's Patent | 20 |
| "Yankee" | 30 |
| Pure Bell Metal. Milkman's Bells. Silver Chime Hand Bells. Globe " White-Metal Tea Extra Fine " Gong Door Bells: Abbe's Patent. "Yankee" Abbe's Extra Large Alarm Door Bells: | 10 |
| Abbe's Patent | 20 |
| "Yankee" | 80 |
| House Bells | 50 |
| Bell-Metal House Bells | 50 |
| Patent Fastening Team Rells | 50 |
| Horse-Car " | 50 |
| Sleigh Shaft Straps | 50 |
| Saddle Chime Bells | 50 |
| Strapped " " | 50 |
| Cotton and Wool Cards | Net |
| Horse Cards | Net |
| Curry Combs Curry Combs | 3314 |
| Rubber Curry Combs. | 1636 |
| Malleable Cock Eyes | 3318 |
| Judd's Harness Snaps | 60 |
| Blake's Belt Studs | 25 |
| " Diagonal | 35 |
| Nash's Saw Sets | 20 |
| Wentworth's Saw Vises | 20 |
| Hall's Nippers and Pliers | 20 |
| Spofford's Braces | 50&5 |
| Reid's "Lightning" Braces | 10 |
| Ratchet Screw Drivers | 20&10 |
| Ciark's Screw Drivers | 1024 |
| "Bee" Gimlets | 1636 |
| Abbe's Patent. Yankee' House Bells. Bell-Metal House Bells. Strapped Team Patent Fastening Team Bells. Horse-Car' Straps. Saddle Chime Bells. Loose Sleigh Strapped " Cotton and Wool Cards. Horse-Cards. Curry Combs. "Perfect "Curry Combs. Rubber Curry Combs. Malleable Cook Eyes. Judd's Harness Snaps Blake's Belt Studs. Baxter's S Wrenches. Diagonal. Nash's Saw Sets. Wentworth's Baw Vises Lowell Hand Vises Hall's Nippers and Pilers. Spofford's Braces. Reid's "Lightning" Braces. Reid's "Lightning" Braces. Reid's "Screw Drivers. Clark's Screw Drivers. Clark's Straps Washer Cutters Bracket Saws. Crossman's Drawing Knives. Crossman's Drawing Knives. | 408712 |
| Penny's Washer Cutters | 50 |
| Crossman's Drawing Knives | 60.6716 |
| " Chisels. | 60&736 |
| Richards' Door Hangers | 11 |
| "Geneva" Hand Fluters | 40.8274.83 |
| "Triumph " Egg Beaters | 15 |
| "Acme" Fry Pans | 40 |
| Penny's Washer Cutters Bracket Saws. Crossman's Drawing Knives. Chisels. Richards' Door Hangers. "Geneva "Hand Fluters. "Dover" Egg Beaters. "Triumph" Egg Beaters. "Acme" Fry Pans. Meat Cutters. Edgar's Stove Shovels. Chatillon's Balances. | 20 |
| Edgar's Stove Shovels | 991 |
| Chatillon's Balances | |
| Steelyards | |
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| | |
| New York Iron Mar | ket |
| | |

New York Iron Market

The past week was characterized by a discouraging experience of dullness in most Extra Flange, $4\frac{1}{2}$ \$\phi\$ @ 5\$\phi\$. branches. In this respect there was a decided contrast with the two weeks preceding. Inquiries were not lacking, but buyers for the most part were desirous of obtaining concessions, making bids slightly under the terms asked. Sellers of Pig Iron are generally firm, furnace agents strenuously insisting that rather than reduce prices any lower they will advise the blowing out of more furnaces. Yet there are one or two parties evidently determined to sell at whatever price is necessary to clinch a bargain.

The demand for Manufactured Iron is quiet in some lines, but Plates and Sheets are more active. Steel Rails have been sold in large blocks, but prices have not improved, competition being as fierce as ever between the respective companies. So far no indications of bottom having been reached are visible, though speculators are watching the course of the market with much interest, ready to take hold as soon as they believe prices are at their lowest.

American Pig.—Only a few small lots of Foundry Pig are reported to have been sold in this market during the past week. Here and there an individual buyer shows his faith in the steadiness of prices by ordering a monthly delivery of a small lot for two or take hold by offering concessions. This most turnace agents are loth to do, and some of them insist that they will advise the blowing out of more furnaces rather than see prices go any lower. Outside brands of Pig are being offered here more freely, and, as they can be had considerably cheaper than Lehigh Irons, they are possibly affecting the sale of the latter to some extent.

Werehant Steel.—There is no change to note either in demand or prices, the former continuing dull and the latter as follows: American Tool Steel, 10¢, with a concession to large buyers; Crucible Machinery, 5½¢; Open-Hearth Machinery, 3½¢@3½¢; Bessemer Machinery, 3¢; Tank Steel, 3½¢@4¢; Boiler Plates, 4½¢@5½¢; Steel, 3½¢@4¢; Steel, 3½¢@5½¢; Stee Virginia Iron is also steadily coming here, and finds a free sale at about the price of Lehigh Iron, less the lighterage. It is possible that favorite standard brands can hold their own amid these unpropitious surroundings, but much will depend upon the firmness of the manufacturers and their agents. Very little movement in Gray Forge Iron is reported for the week. In another part of this issue will be found our monthly statement of the condition of the Anthracite and Bituminous furnaces of the country, which indicates a diminution in the production of Pig Iron in July. The condition of the Anthracite furnaces nearest to this market was as follows on the 1st inst., as compared with a month previously :

Furnaces in July 1. A Weekly capacity July 1. Aug. 1 4,275 4,080 940 940 7,745 7,841 4,685 4,771 Districts. July
New York.... 16
New Jersey ... 3
Lehigh Valley .. 25
Schuylkill Valley 18 60 62 17,645 17,150 This shows two furnaces less in blast on the latter date than on the former, and a reduction of about 500 tons per week in the output. The following are the nominal quotations of Standard Lehigh brands, tidewater delivery : No. 1 X, \$20 @ \$20.50 ; No. 2 X, \$18.50 @ 19; Gray Forge,\$17.50 @ \$18.

Outside brands, 50¢ @ \$1 cheaper. Scotch Pig.-The arrivals of the week were smaller than usual, aggregating but 20 tons Tin, Sept.....

900 tons. Sales are of small lots only, though there are a few inquiries in the market for large lots, which may result in sales if terms can be agreed upon. Quotations continue as follows, though for large lots better terms could be made for some brands: Gartsherrie, \$21 to arrive, \$22 from yard; Shotts, \$21.50 @ \$21.75 to arrive, \$22 from yard; Langloan, \$21.50 to arrive, \$22 from yard; Carnbroe, \$20.50 to arrive, \$21.50 from yard; Glengarnock, \$20.50 to arrive, \$21.50 from yard; Coltness, \$21.75 to arrive; Summerlee, \$20.75 @ \$21 to arrive; Dalmellington, \$20 to arrive; Eglinton, \$19.25 @ \$19.50 to arrive; Clyde, \$20 to arrive.

Bessemer Pig and Spiegeleisen.-We are reported a sale of 1000 tons of foreign Bessemer Pig on private terms. It continues to be quoted nominally at \$19 @ \$19.50. There is some inquiry for Spiegeleisen, as might be expected, in view of the sales of Steel Rails recently made, but no transactions have transpired. Some of the Steel companies report large stocks of Spiegeleisen on hand in consequence of canceled Rail contracts. Quotations of 20 % are nominally \$27.50; 30 %, \$31.50 @ \$32.

Bar Iron .- Some small sales of mill lots have been made, but this branch of trade has been exceptionally quiet. There are bids, however, at rates slightly under quotations, and likewise offers of orders for round lots for future delivery at current prices, but it is understood that they have been declined. Store trade continues quiet. We quote as follows: Best Refined, from store, 2.1¢ @ 2.25¢; at mill, 1.8¢ @ 2¢; Common Iron from store, 2¢ @ 2.1¢; at mill, 1.6¢ @ 1.7¢.

Structural and Shaped Iron.-A fair demand for Shapes is reported. Inquiries are being made for Beams for a few buildings the erection of which is contemplated, and orders for a couple of small bridges are about to be placed. Quotations for small lots range about as follows, large lots commanding special terms : Angles, from store, 2.4¢ @ 2.6¢; Tees, from store, 2.9¢ @ 3¢; Beams and Channels, on dock, 3.5¢.

Plate Iron.-More business is noted, and in some quarters there is considerable activity. The mills are reported well supplied with orders, and prospects are very good for some little time at least. Small lots are quoted as follows: Common or Tank, 23/8#; Refined, 21/2¢; Shell, 21/4¢; Flange, 31/4;

Sheet Iron.-The demand from the stove makers and other large consumers continues very good, orders being booked constantly for fall delivery. We have no change to note in prices of mill lots. Store trade shows some slight improvement, but it is still without animation. Quotations will be found in our list of New York Wholesale Prices.

Steel Rails.—The condition of affairs reported last week has not changed. The manufacturers are still competing vigorously for orders, and nearly every company represented in this market has made sales during the week. during the week. The largest sale made was one of 30,000 tons. The low prices now prevailing are very generally pronounced ruin-ous and uncalled for, but there seems to be no disposition on the part of the manufacno disposition on the part of the manufac-turers to withdraw from the contest, or to effect an understanding which would result in more remunerative prices being estab-lished. The course of the Steel Rail trade is now being carefully watched by speculators, who will endeavor to contract for large blocks whenever they believe that prices can go no lower. Inquiries are frequent from railroad companies, who are very anxious to purchase Rails at such unprece-dentedly-low prices, but the manufacturers refuse to sell except for cash or ample secura monthly delivery of a small lot for two or three months ahead, but buyers are not doing so generally. Salesmen report business very dull in the territory tributary to this city, and buyers can only be induced to this basis

Steel Wire Rods. - Some inquiries have made their appearance during the week, but, as they indicated a desire to purchase at figures very much under quotations, no business resulted. Quotations continue nominal at \$46.50 @ \$47.

Old Raits .- We are unable to hear of any transactions in this line. Holders' views are firmer, in consequence of the disappearance from the market of the lots which were being pressed upon it for some time. They now ask \$18.50 @ \$19.

Scrap Iron.—Only small sales are reported. No. I Wrought is still quoted at \$20 @ \$21, according to location of yard. Old Car Wheels.—We are reported a small sale at \$17, f.o.b. Jersey City.

Metal Exchange.

The following sales have taken place on the floor of the Exchange since our last issue : THURSDAY, July 31. 200 tons Pig Iron Certificates, March. 10 tons Straite Tin, spot...... 10 '' August 10 '' '' '' '' FRIDAY, August 1. .1845 .1845 .1845 SATURDAY, August 2. 185

10 tons Tin, August ... TUESDAY, August 5. .1855

Wholesale Hardware Prices, August 6, 1884.

| W | |
|--|------------------------------------|
| HARDWARE. | - |
| Anvils. Eagle Anvils American. Wright's. Armitage's Mouse Hole. Armitage Nouse Hole. Wilkinson's. It is 113 Anvil Vise and Drill. Millers Falls Co., \$18.00. Chency Anvil and Vise. Als 20. Chency Anvil and Vise. Advance. W doz \$6. Champion. W doz \$6. Champion. W doz \$6. Gold Medal. Fens. W doz \$6. How Lightning. W doz \$6. Rocking Table. W doz \$7. Triumph. W doz \$7. Triumph. W doz \$6. Turntable, Original. W doz \$6. Turntable, Ori | 19 |
| White Mountain \$\psi\$ dos\$5.5 \\ \begin{array}{cccccccccccccccccccccccccccccccccccc | CAN DESCO |
| "1870" | AND MANAGEMENT AND MANAGEMENT MAKE |
| Awi Haite. Sewing, itrass Ferrule. \$8 wing, itrass Ferrule. \$1.00 \(\psi \) dos—dis 40\(\psi \) 10 Patent Sewing, itrass Ferrule. \$1.00 \(\psi \) dos—dis 40\(\psi \) 10 Patent Sewing, it is in the patent Sewing, it is in the patent Sewing, it is in the patent Sewing, common. Awis, shouldered Pop., \$12.00 \(\psi \) gross—dis 40\(\psi \) 10 Awis, shouldered Peg., \$\psi \) gross \$2.45 - \(\psi \) 13 25\(\psi \) 10 Awis, shouldered Peg., \$\psi \) gross \$2.45 - \(\psi \) 13 25\(\psi \) 10 Awis, shouldered Peg., \$\psi \) gross \$2.45 - \(\psi \) 13 25\(\psi \) 10 Awis, shouldered Brad. \$2.70 \(\psi \) gross—dis 20\(\psi \) 10 Awis, shouldered Brad. \$2.70 \(\psi \) gross—dis 20\(\psi \) 10 Awis, Handled Brad. \$4.70 \(\psi \) gross—dis 20\(\psi \) 10 Awis, Handled Scratch. \$4.10 \(\psi \) gross—dis 20\(\psi \) 10 Awis, Handled Scratch. \$4.10 \(\psi \) gross—dis 20\(\psi \) 10 Awis, Handled Scratch. \$4.10 \(\psi \) gross—dis 20\(\psi \) 10 Brad Sets, Alken's. \$4.10 \(\psi \) gross—dis 20\(\psi \) 10 Brad Sets, Alken's. \$4.10 \(\psi \) 40 \(\psi \) 10 Brad Sets, No. 24, \$10.00 \(\psi \) 40 Brad Sets, No. 24, \$10.00 \(\psi \) 40 Brad Sets, No. 24, \$10.00 \(\psi \) 50 Brad Sets, No. 24, \$10.00 \(\psi \) 50 Brad Sets, No. 24, \$10.00 \(\psi \) 50 Brad Sets, No. 24, \$10.00 \(\psi \) 50 Brad Sets, Stanley's Excelsior, No. 3, \$5.00 \(\psi \) 60 Brad Sets, Stanley's Excelsior, No. 3, \$5.00 \(\psi \) 60 Brad Sets, Bronzed. \$4.00 \(\psi \) 10 Brad Sets, Sets, Bronzed. \$4.00 \(\psi \) 10 Brad Sets, Sets, Bronzed. \$4.00 \(\psi \) 10 Brad Sets, Sets, Bronzed. \$4.00 \(\psi \) 10 Brad Sets, Sets, Bronzed. \$6.00 \(\psi \) 10 Brad Sets, Sets, Bronzed. \$6.00 \(\psi \) 10 Brad Sets, Sets, Bronzed. \$6.00 \(\psi \) 10 Brad Sets, Sets, Bronzed. \$6.00 \(\psi \) 10 Brad Sets, Sets, Bronzed. \$6.00 \(\psi \) 10 Brad Sets, Sets, Bronzed. \$6.00 \(\psi \) 10 Bra | |
| Axes.—Best grades. Regular, Bronzed. Double Steel, Bronzed. Triple Steel, Bronzed. Add 757 Triple Steel, Bronzed. Add 40 Fall Pollshed. Beveled. Double Blt Axes. Regular, Bronzed. Steel Pole, Bronzed. Steel Pole, Bronzed. Add 1.00 | |
| Beveled Axie Grease. Frager's, in bulk. Keg F B, 5¢; Pall, F B, 6¢ net Frager's, in boxes. F gress \$10.00 net Axies. Ommon. | |
| Balances Gis Southers Gis Southers Gis Southers Gis 40 | |

| $\begin{array}{cccc} \text{Trenton}. & & & & \\ \text{Wilkinson's}. & & & & \\ \text{J. & Riley Carr, Patent Solid}. & & & & \\ \text{11} \otimes 1 & & & \\ \end{array}$ | 1460 |
|---|---|
| Anvil Vise and Drill. | 20 or |
| Apple Parers | 5.75 |
| Champion # doz # Gem. # doz # God Weda! # doz # | 3.25 |
| Jersey # dos \$7.50—dis 2 Little Star # dos \$7.60 dis 2 | .50 |
| New Lighting | 0 % |
| Rocking Table # 002 % Triumph # dos 5 Turntable, Original # dos 6 | .50 |
| Turntable, Improved | .00 0 % |
| "1872". | .50 |
| Augers and Bits. | 0 % |
| Cook's, Douglass Mfg. Codis 40&10&1 Cook's, New Haven Copper Codis 50&1 Patent Solid Head | 0 % |
| Lewis' Patent Single Twist | 58 |
| Imitation Jennings' Bits (old list). dis 6 Ives' "Jennings' Bits (old list). dis 50&1 | 0 % |
| Car Bits, New Haven Copper Co | 0 % |
| Expansive Bits, Ives' No. 4, per dos., \$60 dis 25&1 (Expansive Bits, Blake's | 2 % |
| Expansive Bits, Ansonia | 8 |
| Hollow Augers, Douglass'. dis 23 Hollow Augers, Bonney's Adjust, # dz. \$48. dis 40&10 Hollow Augers, Stearns' Adjust, # dz. \$48. dis 20&10 | 8 8 |
| Hollow Augers, Ives' Expansive, each \$4.50—dis 40&10 Hollow Augers, Universal Expan., each, \$4.50—dis 20 | N. W. |
| Gimlet Bits. \$7.50 \(\pi\) grose, dis 50 Gimlet Bits, Diamond. \(\pi\) dos. \$1.10, dis 25&10 | N M M |
| Double Cut Gimlet Bits, Shepardson's | MAM |
| Double Cut Gimlet Bits, Hartwell'sdis 60 Double Cut Gimlet Bits, Douglass'dis 40 Double Cut Gimlet Bits, Ivas'dis 50 | MMM |
| Holts Bit Stock Drills | XXX |
| "1878" # doz \$6" 1878" # doz \$6" Augers and Bits. First Quality dis 60e 6003. Cook's, Douglass Mfg. Co. dis 40e 1081. Cook's, Douglass Mfg. Co. dis 60e 1081. Cook's, Douglass Mfg. Co. dis 60e 1081. Cook Mfg. Co. s Jennings' Bits (old list). Cook Mfg. | × |
| Patent Sewing Long \$1.20 \times doz -no | ot : |
| Patent Peg, Plain Top\$10.00 # gross—dis 40&10 Patent Peg, Leather Top\$12.00 # gross—dis 40&10 | g g |
| Patent Peg. Pain Top. \$10.00 \times gross-dis 40&10 Patent Peg. Leather Top. \$12.00 \times gross-dis 40&10 Awis, Brad Sets, &c. Awis, Swing, Commerce \$10.00 \times gross \$1.70 - dis 25&10 Awis, Swing, Commerce \$2.00 \times gross \$2.45 - dis 25&10 Awis, Shouldered Peg. \$2.00 \times gross \$2.45 - dis 25&10 Awis, Shouldered Brad \$2.70 \times gross \$2.45 - dis 25&10 Awis, Shouldered Brad \$2.70 \times gross \$2.60 - dis 25&10 Awis, Handled Brad \$7.50 \times gross-dis 25&10 Awis, Handled Scratch \$4.150 \times gross-dis 25&10 Awis, Socket Scratch \$4.150 \times gross-dis 25&10 Awis, Socket Scratch \$4.150 \times gross-dis 25&10 Awis, Socket Scratch \$4.150 \times gross-dis 10&10 Brad Sets, Alken's \$7.00 \times gross-dis 10&10 Brad Sets, Stanley's Excelsior, No. 1, \$7.50 \times gross-dis 25&10 Brad Sets, Stanley's Excelsior, No. 2, \$4.00 \times dis 25&10 Brad Sets, Stanley's Excelsior, No. 3, \$5.00 \times dis 25&10 Brad Sets, Stanley's Excelsior, No. 3, \$5.00 \times dis 25&10 Brad Sets, Stanley's Excelsior, No. 3, \$5.00 \times dis 25&10 Brad Sets, Bronzed \$7.2 \times did 1.0 Brad Sets, Bronzed \$6.00 \times did 1.0 Brad Sets Brad Sets \$6.00 \times did 1.0 Brad Sets | M M |
| Awis, Patent Peg | MMM |
| Awls, Handled Scratch | MMM |
| Millers Falls Adj. Tool Handles @ doz \$12—dis 25 Brad Sets, No. 42, \$10.50; No. 43, \$12.50dis 70&10&5 Brad Sets, Stanley's Excelsion, No. 1, \$7, 50. | M M |
| Brad Sets, Stanley's Excelsior, No. 2, 44.00. dis 25&10 Brad Sets, Stanley's Excelsior, No. 3, \$5.50. | \$ 2 |
| Regular, Bronzed per doz \$7.2 Double Steel, Bronzed 37.2 | 5 H |
| Triple Steel, Bronsed add 1.0 Steel Pole, Bronsed add 1.0 Full Polished add 5.5 | 0 1 |
| Beveled | 0 1 |
| Steel Pole, Bronzed | 0 4 |
| Axle Grease. Frazer's, in bulkKeg # B, 5¢; Pail, # B, 6¢ ne Frazer's, in boxes# gross \$10.00 ne | LIN |
| Axies. | S H S |
| Balances. dis 302 102 5 | 88 |
| Table Tabl | D |
| Hand, White Metal | DC |
| Gong, Abbe's | - |
| Crank, Taylor's dis 25&10 2 Crank, Brooks' dis 50&10 2 | |
| Lever, ourgent become activities of the process of | 1 16 |
| Lever, Taylor's Bronsed or Plated net Lever, Taylor's Japanned dis 25&10 % Lever, R' E. M. Co. s. dis 50&10&2 % | EUU |
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| COW, COMMON WYOUKEL | DOM |
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| Calipers | 25 % 25 % 25 % 25 % |
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| merican, 5-10., \$5, 5-10., \$6, 50, 7-10., \$6, 50 each, net onesetic Fluter \$1.50 each, net eneva Hand Fluter, White Metal. \$7 dos \$12, dis 25 % rown Hand Fluter, Nos. 1, \$15; 2, \$12.50; 3, \$10.00, \$70 dis 30 % | Rive Soci Plan Scov Han |
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| MMM | "Champion" Weding Mfg Co. \$15.00 dis 50\$16 | 86 |
| MM | Victor, No. 1, \$15; No. 2, \$16.50; No. 3, \$18 | RMMN |
| K.W. | U. S | MANA |
| 8 | Sterling improved (Anti-Friction) dis 68&16 | MMM |
| N % | Harness Saaps. Anchor (T. & S. Mg Co.) | R MX |
| ANNA | Anchor (T. & S. Mfg Co.). dis 65 Hachor (T. & S. Mfg Co.). dis 65 Judd's, list of 1½ changed to \$14.00. dis 65 Judd's, list of 1½ changed to \$14.00. dis 65 Fitch's (Briscol), list of 1½ changed to \$14.00. dis 65 Hotchkiss dis 10 | KWWW |
| MMM | Andrews' | MMM |
| X X | German, Sargent's new list | NAMA |
| AMMA | | |
| MM | Shingling, Nos. 1 2 3 | 20 |
| MMM | Shingling, Nos. 1 2 3 | × |
| 200 | Shingling Nos 1 2 2 2 dos 89 00 89 50 40 00 | % |
| 2 2 | Shinging, Nos. 1 23. | % |
| 4 | Claw, Nos. 12 3. # doz 8.25 8.75 9.25 Lathing, Nos. 12 3. # doz 7.50 8.00 8.50 Underhill Edge Tool Co | × |
| 1 | Claw Nos. 1 2 3. | |
| | C. Hammond & Son. Shingling, Nos. 1 2 3 | e c |
| | Lathing, Nos. 1 2 3. P doz 8.00 8.50 9.90 Claw, Nos. 1 2 3. P doz 8.00 9.00 9.50 Broad, Nos. 1 2 3. P doz 11.00 13.50 16.00 | |
| | Simmons | 6 |
| | Broad, Nos. 1 2 3 4 W dom 9.00 10.00 12.00 14.00 | 1 |
| | Prodd, Nos. 5 o 7 s. \$\psi\$ doz \$15.00 18.00 28.00 22.00 Ollins | |
| 1 | Claw, Nos. 128 | |
| | Half, Nos. 1 2 3. # doz 8.00 8.50 9.00 Broad, Nos. 1 2 3. # doz 10.00 11.00 13.00 Broad, Nos. 4 5 6. # doz 14.50 16.50 18.00 | |
| 4 | Ax Pattern. Nos. 1 2 3 # dos 10.00 11.00 12.00 Hay Knives. Lightning " | |
| H | Hay Knives. Lightning | 1 |
| 000 | Hinges. ate, Western ate, Western ate, Western ate, Western ate, Mestern ate, Clark's, Nos. 1 28 | 1 |
| 3000 | ate, N. State. \$\psi \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | 1 |
| GGR | ate, Seymour's | |
| RRR | olled Blind Hinges dis 50&10 5 olled Plate dis 60&10 5 olled Raised dis 60&10 5 | |
| E Si | hate Hinges 8, 10 & 12 in., \$5.55, \$\sqrt{100 m}\$ (.dta 10 g) Providence '' over 12 in., \$4.50 \$\sqrt{100 m}\$ (.dta 10 g) Prew Hook and (8, 10, 12 in., \$6.75 \$\sqrt{100 m}\$) Stran. | 1 |
| H | eavy Welded Hook { 8 to 12 in., \$7.59 \(\pi \) 100 \(\mathbb{n} \) \(\cdot \)net (36 in., \(\pi \) up, \$80.50 \(\mathbb{n} \) 100 \(\mathbb{n} \) \(\cdot \)net | 1 |
| Sc W | rew Hook and Eye | 1 |
| R | Hoes. | |
| Sch | | 1 |
| Gi | Holsting Apparatus. Moore's" Hand Hoist, with Lock Brake | To a second |
| St | Moore's 'Differential Pulley Blockdis 20 \$ Hollow-Ware. ove Hollow-Ware, Grounddis 60 \$ | 1 |
| G | Moore's Differential Pulley Block. dis 20 g Hollow-Ware, ove Hollow-Ware— dis 60 g nameled and Tinned Hollow-Ware— dis 60&10 @ 50&10&50 g Oval Boilers, Saucepans and Glue Pots. dis 40 g ray Enameled Ware. dis 45 g sultens Hollow-Ware. dis 50&5 g lavanized Tea-Kettles— dis 50&5 g | |
| Ri | sittess Hollow-Ware. dis 50&5 % | A SECOND |
| Bi | rd Cage, Sargent's listdis 60&10 g | 8 |
| Co | etton Patented (N. Y. Mallet & Handle W'ks), dis 30 % | 02020 |
| Be Cl | nch Hooks | MMMP |
| Cle | othes Line, Reading list | E |
| Co | 11 |] |
| Pie | ire Coat and Hat, Miles'. dis 70 cture Hooks, Brown's Pat. Solid Brass, \$4.00 g gross. dis 25 cture Hooks, Brown's Pat. Solid Brass, \$4.00 g gross. dis 25 cture to the first sale and Hooks & Staples dis 70 crought Staples, Stanley's list. dis 70 cture Strew Hooks and Serow Eyes. dis 70 cture Strew Hooks and Serow Eyes. dis 70 cture Strew Hooks and Serow Eyes. dis 70 cture sand Russ. | CG |
| W | rought Staples and Hooks & Staples dis 70&74&10 \$ rought Staples, Stanley's listdis 70&71&10 \$ tre Screw Hooks and Screw Eyes | 88 |
| WI | hiffitree—Patentdis 40&10 @ 50 % | HV |
| 1 | oks and Eves—Brass | BT |

| _ | |
|--|--|
| 55550X | Horse Shoes. Burden. R. I. Horse Shoe Co., Perkins' Improved Light, Medium and Heavy. Walker's Forged, Light, Med. or Heavy. |
| 5 % 6 % 6 % 6 % 6 % 6 % | Dunning's Steel. |
| 0% | Ice Mallets, Pick in head. # doz \$1.75, dis 15 \$ ice Mallets, Pick in handle. # doz \$2.00, dis 15 \$ ice Axes, Small Cast or Malleable. # doz \$1.20, dis 10 \$ ice Axes, Small Cast or Malleable. # doz \$1.20, dis 10 \$ ice Axes, Small Cast or Malleable. # doz \$1.20 dis 10 \$ ice Axes, Small Cast or Malleable. # doz |
| et et | Ice Cream Freezers |
| MAMMA | Family |
| MMMM | Kettle Ears. Eberhard Mfg Codis 83% % |
| dis 40 % | Knives. |
| Ket v | Knobs. Carriage, Japanned. Base, Rubber Tip. Hemacite Door Knobs, new list. Joor Por. Jap'd. Door Por. Plated. Joor Por. Plated. Door Por. Plated. Joor Por. Jap'd. Joor Jap'd. Jo |
| KKKKK | Door Por. Plated Same discounts as Door Locks. Door Por. Furniture Plain |
| XXXXXX | Picture, Sargent's dis 60&10 g |
| NAMMAN | Ladles |
| Namana a | Lanterns. Tubular, Standard No. 0, ♥ dos. \$7.50 Tubular, Standard No. 1, ♥ dos. \$9.00 Tubular, Lift Wire, No. 0, ♥ dos. \$0.00 Tubular, Lift Wire, No. 1, ♥ dos. \$0.00 Tubular, Lift Wire, No. 1, ♥ dos. \$0.80 Guards for Tubulars, add ♥ dos. \$10.80 Guards for Tubulars, add ♥ dos. \$10.00 Guards for Tubulars, add ♥ dos. \$0.00 Guards for Tubulars, add ₱ dos. \$0.00 |
| i I | THE WAS STREET OF THE PROPERTY OF THE PARTY |
| 100.00 | Dunlap's Improved |
| 100 | Lines. Lines Fish Lines Fish Otton Chalk Steep S |
| 3 | dasons' Colored Cotton |
| HHY | Locks, Padlocks, Cabinet Locks, &c. Door Locks, Escutcheons, &c. dis 60&2 @ 60&10&2 geading Hardware Co. Crev. list Jan. 2, '84. dis 60&2 5 elate. Many's "Extension Cylinder" \$10.50 \times dis 335, &c. 2 geals Many's "Extension Cylinder" \$10.50 \times dis 40 geals Jan. Co. dis 40 gea |
| 000004 | |
| No or Market | ate otandard prawer and Desk 406:10 s Sbepardson" or "U. 5." dis 35 s Felter" or "American" dis 406:10 s agle Trunk PADLOCKS. |
| KKKKK | PADLOCK PADL |
| ERRA | agle dia 40 % omer's, Nos. 0 to 91 dia 22 % omer's, Nos. 0 to 91 dia 40 % omer's, Nos. 200 to 505 dia 25 % E. Dietz dia 45 % dia 25 % dia 26 % dia |
| | |
| N | Marcounce bottles dos, \$1.75; \$\pi\$ gro. \$17.00 net Allets. Hickory |
| Di | Meat Cutters 2 |
| Pe | Try's.Nos. 1 |
| H | des'Nos. 11 12 13 13 14 15 16 16 16 16 16 16 16 16 16 16 16 16 16 |
| An | 0erican |
| Ki | Nos. 10 12 22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 |
| Ki Ki Sii Pe | eser's Botarch |
| De | F dos |
| An b Los Sm Co | Hincing Knives. 1. (2d quality), \$\pi\$ gro, 1 blade, \$7; 2 blades, \$13; 3 lades, \$16. Net hrop's. tith's, \$\pi\$ dos, Single, \$2.00; Double, \$3 |
| Ste Ste Ste Chu | Colasses Gates |
| Bus Lix We Bos | hb's |
| N | wire Nalis |
| Gia N In be | ### Puller. **tias Hammer. |
| Wa Nata | tagon 956 off list shers. 8366 of list ut Crackers. 1816 of list ut Crackers. 1816 of list ut Crackers. 1816 of list ut Crackers. 1816 of list dis 50 g |
| Q | ke's Pattern. |
| | IICF9. |
| Ial North | c and Th |
| للتوم | S AM CONTRACTOR OF THE CONTRACTOR OF STREET |

| August 7, 1884. | T |
|---|--|
| Packing, Steam. N. Y. Belting & Packing Codis 20 % | Saws. Disston's Circular, Mill and Cross Cutdis 45&10 |
| Peach Parers. \$\psi\$ doz \$15\$, dis 10 \$\frac{2}{3}\$ Rotary Knife \$\psi\$ doz \$15, dis 10 \$\frac{2}{3}\$ Diamond State \$\psi\$ doz \$15, dis 10 \$\frac{2}{3}\$ | Disston's Hand, Panel, Rip, &c |
| Penclis. Faber's Carpenters'. high list, dis 50 % Faber's Round Gilt. \$\Pi\$ gro \$5.25 net Dixon's Lead. \$\Pi\$ gro \$5.50 net Dixon's Lumber. \$\Pi\$ gro \$0.75 net Dixon's Carpenters'. dis 40&10 \$\pi\$ | Boynton's Lightning Hand, Panel and Ripdls 25 Wheeler, Madden & Clemson Mfg. Co.'s Handdis 30 W. M. & C. Champion X Cuts, Regular |
| Dixon's Lumber. W gro \$0.70 net Dixon's Carpenters'. dis 40&10 \$ Picks. | W. M. & C. A Cuts, Thin Back |
| Picks. Railroad, 5 to 6, \$11.00; 6 to 7, \$12 | Disston's Circular, Mill and Cross Cut dis 45&10 Disston's Hand. Panel, Rip. &c dis 20&10 Boynton's Hand. Panel, Rip. &c dis 20&10 Boynton's Lightning Cross Cuts, new list dis 40 Boynton's Circular and Mill dis 44 Boynton's Circular and Mill dis 48 Boynton's Lightning Hand, Panel and Rip dis 25 Wheeler, Madden & Clemson Mfs. Co.'s Hand. dis 50 W. R. & C. Champlon X Cuts, Regular & Foot 23, Livingston's Hutcher and Cate & Foot 23, Livingston's Hutcher and Center dis 20 Livingston's Hutcher and Center dis 20 Livingston's Framed Wood— Nos 101 102 103 104 105 Per dos 100 8.50 10.00 7.50 6.20 ne Simond's Crescent-Ground Cross Cuts, patent De- cember 26, 1882 dis 25 Esace Hand Panel and Rip dis 25 Peace Cross Cuts, Standard & Foot 208 Peace Cross Cuts, Standard & Foot 208 Peace Cross Cuts, Standard & Foot 208 Peace Cross Cuts, Thin Back & Foot 208 Richardson's Circular dis 46 Richardson's Cross-Cuts, thin back & Foot 208 Richardson's Cross-Cuts, thin back & Foot 32, Richardson's Cross-Cuts, thin back & Foot |
| Picture Nails. Brass Head, Sargent's list. Brass Head, T. & S. Mfg. Co. Concelain Head, Sargent's list. Concelain Head, Sargent's list. Concelain Head, Sargent's list. Concelain Head, Jud's list. Concelain Head, T. & S. Mfg. Co. Concelain Head, Jud's list. Concelain H | Peace Circular and Mill. dis 45&10 Peace Hand Panel and Rip. dis 20&10 Peace Cross Cuts, Standard. # foot 26% |
| Porcelain Head, T. & S. Mrg. Co | Peace Cross Cuts, Thin Back. # foot 29% Peace Band Saws, all widths. dis 20&10 Richardson's Circular dis 40 |
| Planes and Plane Irons. Bench, First Quality | Richardson's Cross-Cuts. © foot 325 Richardson's Cross-Cuts, thin back. © foot 325 Richardson's Hand Panel, Butcher and Web |
| Bailey's (Stanley R. & L. Co.). dis 20&10 % The Stanley (S. R. & L. Co.). dis 20&10 % Bailey's "Victor" dis 20&10 % | Barry's Circular |
| Plane Irons, Buck Bros | White, Vermont |
| Pinking Irons | Naw Sere |
| Plane Irons, Sandusky Tool Co | Stillman's Genuine |
| 5 in., \$13.50; No. 4, 7 in., \$21.00 \(\text{#} \) dos dis 20&10 \(\text{\$\chi} \) Humason & Beckley Mfg. Ce | Nash's dis 20&10 Hammer, Hotehkiss \$5.50, dis 10 Hammer, Bemis & Call Co.'s new Patent dis 30&5 |
| Eureka Filers and Appear dis 25 g. P. S. & W. Cast Steel dis 335 & 10 g. P. S. & W. Tinners' Cutting Nippers and 6 g dis 10 g. | Bemis & Call Co.'s Plate |
| Plumbs and Levels. Disaton's dis 45&10 % Stanley R. & L. Co a Pat. Adjustable dis 65&10 % | Boynton's Patent X Cut, W dos \$12.00; Hand Saw, \$\frac{\psi}{2}\$ dos \$10.00 \$10 |
| Plumbs and Levels. dis 45&10 € Stanley R. & L. Co s Pat. Adjustable dis 65&10 € Stanley R. & L. Co s Pat. Adjustable dis 65&10 € Stanley R. & L. Co s Non-Adjustable dis 65&10 € Chapin's Patent Adjustable dis 65&10&10 € Chapin's Non-Adjustable dis 65&10&10 € Standard Rule Co 's New Adjustable dis 65&10 € Standard Rule Co 's Non-Adjustable dis 65&10 € Standard Rule Co 's Non-Adjustable dis 65&10 € Pocket Levels dis 65&10 € Davis' Inclinometers dis 20 € Section 10 € Davis' Inclinometers dis 20 € Davis' In | Croissant (Keller)No. 1, \$15.00; No. 2, \$34.00, dis 40 Scales. Hatch Counter No. 171 |
| Standard Rule Co.'s Non-Adjustable dis 65&10 % Johnson's Patent Adjustable dis 65&10 % Pocket Levels dis 65&10 % Davis' Inclinometers dis 20 % | Hatch, Tea, No. 161. \$\Pi\ \doz \\$15.00\$, \dis 40&10\$ Union Platform \$8.00\$, \dis 55 Fairbanks' \dis 30&5 |
| Post Hole and Tree Augers. Samson Post Hole Digger. # dox \$36.00, dis 20%10 % Fletcher Post Hole Augers. # dox \$36.00, dis 20 % Eureka Diggers # dox \$27. Luceka Diggers # dox \$27. Net Leed's each \$2.50. Net Vauginan's Hollow Tube Post Hole— 6 in., \$23.00; 7, 8 and 9 in. \$25.00 # doz. dis 20%10 % Kohler's Little Giant. # dox \$27 net | Scales S |
| Eureka Diggers # dos \$27 | Howe's dis 33½ Chatillon's Grocers' dis 40 Chatillon's Eureka dis 25 Chatillon's Eureka dis 25 |
| Kohler's Little Giant | Family Universal. © dos, 12 m, \$30.00; 24 m, \$36.00, no Family, Turnbull's |
| Fruning Hooks and Shears. Disston's Combined Fruning Hook and Saw, \$\psi\$ doz \$18.00. dis 20&10 \$5 \$18.00. dis 20&10 \$5 \$18.00. dis 20&10 \$6 \$18.00. dis 20 | Scale Beams, Custerdis 25 Scrapers. Adjustable Box Scraper (S. R. & L. Co.) \$6.50, dis 20&10 |
| Pruning Shears | Adjustable Box Scraper (S. R. & L. Co.) \$6.50, dis 20&10 Box, 1 Handle. \$\psi\$ doz \$4.00, dis 10 Box, 2 Handle. \$\psi\$ doz \$4.00, dis 10 Box, 2 Handle. \$\psi\$ dos \$0.00, dis 10 Defiance Box and Ship dis 20&10 Box |
| Pulleys. Hot House and Tackle | Ship, Common |
| Bras : Screw | Screen Corners. Porter's Pat. Window and Door Framedis 33\/3 Screw Drivers. |
| Hay Fork, "Anti Friction" | Douglas Mfg Co. .dis 20&10&10 Disston's. .dis 40 Disston's Patent Excelsior. |
| Shade Rack dls 40 % Pumps. Cistern dls 40 @─% Pitcher Spott. dls 50 @─% Yard and Set Length dls 40 @─% | Disston's Patent Excelsion |
| Yard and 38 Length | Sargent & Co.'s Nos. 20 & 30, Cast Steel |
| Punchos. Saddlers' of Drive \(\psi \) doz \(\frac{1}{2}.26 \); 2.50 dls 55 \(\frac{1}{2}.56 \) mis \(\frac{1}{2}.6 \); Cast Steel Drive dls 50&5 \(\frac{1}{2}.5 \); Bemis \(\frac{1}{2}.6 \); Cast Steel Drive dls 50&5 \(\frac{1}{2}.5 \); Bemis \(\frac{1}{2}.6 \); Cast Steel Drive | Champion |
| Beill The Door Wrought Brass 9 254 dis 20 5 | Flat Head Iron dis 75 Round Head Iron dis 70 Flat Head Brass dis 75 |
| Sliding Door, Bronned Wrt. Iron # foot 12¢, dis 35 % Sliding Door Iron, Painted # foot 4¢, dis 30&10 % Barn Door, LightInch | Round Head Brass |
| Rail. Sliding Door, Wrought Brass | Flat Head Iron |
| Terry's Wrought Iron, 5¢ ≠ foot net Rakes. dis 60 ≤ Cast Steel dis 60 ≤ Malicable. dis 40 ≤ Hay. dis 40 ≤ | Bench, Wood, Beech |
| Malleable | Hand, Wood dis 25&10 Hand Rail, Sargent's dis 66%&10 Hand Rail, Humason, Beckley & Co. s dis 70 Hand Rail, Am Sersey Co. |
| R. M. Sers. dis 20 % J. R. Torrey Rasor Co. dis 20 % J. R. Torrey Rasor Co. dis 10 to £, dis 10 R. M. Ser Streps. dis 45@50 % dis 45@50 \$ | Jack (Wilson's) |
| Razor Strops. dis 45650 \$ Genuine Emerson. dis 354 \$ Badger's (not Emerson). dis 334 \$ Imitation Emerson. \$\psi\$ doz \$\var200.0\$ (dis 20&10 \$ Torrey's. dis 20 \$ \$\var2000\$ | Lester, \$10.00. dis 25; Rogers, \$5.50. dis 25; Scythes. dis 25; |
| Torrey S | Scytnes dis 20 ; Shears and Scissors. American (Cast) Iren |
| Rivets. Black Iron and Tinned | Tinners' |
| Iron Carriage Rivets | Reinsch Tailor's Shears Gis 3355 Mass. Cutlery Co. St. Trimmers dis 75 Cast Steel Trimmers dis 80 Wiss, J., & Sons' list, Dec., 1881 dis 60 |
| Black Flow and Tinned dis 40 % | Wiss, J., & Sons' Tailors' Shearsdis 50 3 Sheaves. Sliding Door, M. W. & Co., list |
| Rods.—Stair, Brass | Sliding Door, M. W. & Co., list |
| ### Black Walnut | Sliding Door, Moore's Anti-Frictiondis 60 g Sliding Shutter, R. & E. list |
| Manila | |
| Sisal % inch F b 10 ¢ Sisal ¼ and 5-16 inch F b 10½¢ Sisal ½ and 5-16 inch F b 10½¢ Sisal B 0½¢ | L. & I. J. White |
| Rules. dis 75&10 % Boxwood. Ivory. dis 50 @ 50&10 % Standard. Ivory. dis 50 @ 50&10 % | Shevels and Spades dis 17% Ames' Shovels, Spades and Scoops dis 17% Grimiths' dis 50&10 Old Colony dis 15 Old Colony dis 15 Old Colony dis 10 Old Colony dis 10 Old Colony dis 20 Old Colo |
| Stephens | Lehigh Mfg. Co |
| Self-Heating | Remington's (Lowman's Patent). dis 20 % Remington's (Lowman's Patent). dis 30 % Rowland's. dis 50&10 % |
| Mrs. Pott's Irons, Square Back | Shovels and Tongs. Iron and Brass Head, R. & E. list. dis 60&10&2 % Iron and Brass Head, P. 8. & W. |
| New England | Square Frames, by case |
| Bacder & Adamson's Flint, 2, 2)4 & 2 5.00 \(\psi\) ream Bacder & Adamson's Flint, assorted. 4.75 \(\psi\) ream Bacder & Adamson's Star 3.75 \(\psi\) ream | Spoke Shaves. |
| Bartles Best Flint, Nos. 2 to 3 | ron |
| Bartles Best Flint, No. 314 | Spake Triumers \$\psi\$ dos \$10.00, dis 50 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ |
| Bartles Emery Cloth # ream 18.00@ 20.00 } dis 20 5 Crocus Cloth | |
| Gage's | Special |
| White Cotton Braided 33% € 34 € a net Common Russia Sash 8 B 13 € Patent 18 € 18 € 18 € 18 € 18 € 18 € 18 € 18 | Wm. Rogers Mrg. CO |
| 14¢ | Cast Steel, Silver Plated. dis 3314 %. Cin (P. S. & W.), Teas. \$1.95 \$\pi\$ gro net Con (P. S. & W.), Tables \$2.00 \$\pi\$ gro net Con (Courless How Co) \$4 is 10 \$\pi\$ |
| Silver Lake, B Quality, White | |
| Chinese Laundry (N. E. Butt Co.) | Section Sect |
| dis 50 5 aroughton's Burgiar Proofdis 3834 8 | Stocks and Dies |
| A dis 10 % Ltwell Mfg. Co. dis 26 % Frammond's Window Springs. dis 26 % 8 % Corthuc Window Springs. No.1 \$10.00 W grown. dis 15 % | Stone. Cindostan No. 1, 6#; Ax, 8#; Slips, 10 # |
| Common Sense, Japanned, Coppered and Bronzed. # gross \$5.00 net v | Stone |
| Cempshall's Gravity | urkey Oil Stone (Chase) |
| Payson's Perfect | ake Superior Slips (Chase) |
| ances: Malleable Iron, February, 1884, list | oseph Dixon's |
| Company Comp | Stove Pollah. |
| nterprise Mfg. Co | oynton's Noon Day, # gro, No. 1, large, \$5.50; No. 2 small, \$3; No. 3, medium, \$1. |
| | |

| | Tacks, Brads, &c. |
|------|--|
| 3.0 | New List, Sept. 1, 1882. |
| 8 6 | Tinned Swedes Tacksdis 30 %) |
| 20% | Tinned American Tacksdis 30 % |
| 0% | American Cut Tacks |
| 5% | Copper Tacks and Nails. dis 30 % |
| 0% | Swedes Hungarian Nalisdis 35 % |
| 90 | Gimp and Lace Tacks |
| 160 | Finishing Nails |
| 0 10 | Trunk and Clout Nailsdis 25 % |
| - 4 | Rogket Nails |
| 36 | Brush Tacksdis 20 % 3 |
| 5% | Leathered Carpet Tacksdis 20 % |
| 5 % | Chair Natis |
| 0% | Double-pointed Tacks. die 708 10 4 |
| 0 % | Tap Borers. Common and Ring Ives' Tap Borers. Nos. 1, 2, 4—dis 15&10 5 Ives' Tap Borers. Nos. 13, 14—dis 25&10 7 Ives' Tap Borers. Nos. 13, 14—dis 26&10 7 Enterprise Mfg. Co. Clark's. dis 20&10 7 Tapes. Messurias |
| 160 | Common and Ringdia 20 % |
| 0 % | Ives' Tap Borers |
| 0% | Enterprise Mfg. Co |
| 96 | Clark's dis 20210 % |
| 160 | Tapes, Measuring. |
| | Americandis 25&10 % |
| 5 % | Tapes, Measuring. American dis 25&10 % Spring. dis 40 % Chesterman's Regular list dis 20 @ 25 % Thermometers. |
| - /- | Thermometers. Regular list dis 20 @ 25 % |
| | |
| 28 | Tobacco Chattan |
| 98 | Enterprise Mfg. Co. (Champion) |
| | Wood Bottom # dos \$10.00, dis 25&10 \$ |
| | Nashua Look Co. I |
| 5 % | Wilson's # doz \$18.00 dis 50@55 % |
| 18 | Clipper (Sargent & Co.) |
| 121 | Acme # dos \$20.00, dis 40 % |
| 38 | Tin Case |
| 2 6 | Machines (P. S. & W.)list add 20 % day 10 g |
| 22 | Machines (P. S. & W.) |
| 5 % | Transom Lifters |
| 3 8 | Reiher, Imp. Lifter, list, Oct., 1883 die 25 85 g |
| 121 | Excelsiordis 50&10&2 % |
| 8 | Trapa. dis 50&10&2 % Game, Newhouse dis 35 % Game, Onelda Pattern. dis 00&10 % Game, Blake's Pattern. dis 00&10 % |
| 1% | Traps Game, Newhouse dis 35 g Game, Newhouse dis 60c10 Game, Blake's Patent dis 60c10 Game, Blake's Patent dis 90c10 Mouse, Wood, Choker P dos 10.0 dis 10 Mouse, Round Wire P dos 25.00 dis 10 Mouse Cage, Wire P dos 25.00 dis 10 Mouse Cage, Wire P dos 25.00 dis 10 Mouse Castch'emailve P dos 25.00 dis 10 Trew F d |
| 231 | Game, Blake's Patent |
| 8 | Mouse, Wood, Choker. # dog holes, 15¢ |
| | Mouse, Round Wire # doz \$1.50, dis 10 % |
| 1 2 | Mouse Catch, am alive @ doz \$2.50, dis 10 % |
| 18 | Mouse, "Bonanga" # gross \$10 net |
| 8 | Mouse, Delusion # gross \$18.00, dis 20 ≤ |
| 2 | Rat. Decoy |
| 18 | Lothrops' Brick and Plastering die of |
| 131 | Reed's Brick and Plastering. dis 15 % |
| 21 | Pages Plasteringdis 20&10 % |
| 18 | Clement & Maynard's |
| 8 | Rose's Brickdis 15 % |
| et | Brade's Brick |
| 1% | Garden dis 20 % |
| 2 (| Triers |
| 2 2 | Triers. Butter and Cheese. dis 25 % Truck - Wurchous - &c. Penfield Block Co.'s list, 1882. dis 40 % Twine. |
| | Penfield Block Co 's Het 1989 |
| 21 | Twine. |
| 18 | No 10 Flow Tenters 1/ and 1/ BC. B. |
| 8 | No. 18. " Wine, 14 and 14 h Halls18¢ 20¢ |
| et | No. 36, " " Mand 12 " 17# 18# |
| 196 | No. 204, Mattrass, 4 and 54 " |
| | Mason Line, Linen 12 " 28¢ |
| 8 | 2-Ply Hemp, 14 and 16 B Balls (Spring Twins) 144 |
| " | 3-Ply 1 b Balls |
| 8 | Twine. No. 12, Flax Twine, 14 and 14 B Balls. BC. B. No. 18, " 4 and 14 B Balls. B86 20e No. 38, " 4 and 14 " 17e 18e No. 39, Mattrass, 4 and 14 " 17e 18e Chalk Line, Cotton, 16 B Balls. See 28e Mason Line, Linen, 16 " 55e 2-Ply Hemp, 14 and 18 B Balls (Spring Twine). 14e 3-Ply " 18 Balls. 14e 3-Ply " 14 B Balls. 14e 3-Ply " 14 B Balls. 14e 3-Ply " 14 B Balls. 14e |
| 196 | 2, 3, 4, and 5 Ply Jute, 16 B Balls |
| 1% | 3-Piy 14% \$\frac{1}{2}\% \$\frac{1}{2}\\$ Balls. 13\varphi\$ Cotton Wrapping, 5 Balls to \$\frac{1}{2}\\$. 3, 4, and 5 Ply Jute, \(\frac{1}{2}\) Balls. 11\varphi\$ Cotton Mops—6, 9, 12 and 15 \(\frac{1}{2}\) to doz. 17\varphi\$ |
| N X | |
| 8 | |
| 1% | THE IENNINGS & COTEST |

| | 1 |
|------|--|
| | Vises |
| | ▼ Solid Boxdls 50 % |
| | Solid, Peter Wright's15366 |
| | Solid, Wilkinson's14@15@ |
| -1 | Parallel, Fisher & Morris Double Screwdis 15&10 % |
| 66 | Parallel, Stephens' |
| | Parallel, Parker's |
| 0 | Parallel, Wilson's |
| B6 | Parallel, Howard'sdis 20 2 |
| 95 | Parallel, Bonney'sdis 3073 2 |
| 3 | Parallel Samuels |
| - | Parallel Par |
| Ε. | Parallel Double Conser Lea |
| X | Parallal Propries die 25 d |
| [22] | Parallal Simpson's Addustable dis 25&10 S |
| | Saw Pilors Donnavia 20 dos 815.00 dia 8314 6 |
| | Saw Filers Steamer's dis 20 % |
| 20 | Saw Filors Honkins 2 20 dog \$17.50 dis 10 \$ |
| 10 | Saw Filers Reading dis 40&10 S |
| | Saw Filers, Wentworth dis 20&10 % |
| 1 % | Cowell Hand Vises dis 20 % |
| 2 5 | Richardson's Vise and Anvildis 25 % |
| 2.75 | XXX - ben Classes |
| 1 % | Washer Cutters. |
| 70 | Tobaconie Patent P doz \$12.00, dis 20c10c10 % |
| | Donnals 20 des Del 214 . Tentil 218 dis 55 |
| 1% | Appletonia and des for \$12; July 0, \$10. die 50 % |
| 1 % | Washer Cutters. Washer Cutters. Washer Cutters. Washer Cutters. Washer Cutters |
| 15 | Washers.—See Nuts and Washers. |
| | Well Wheelsdis 00& 10 % |
| 18 | Well Wheelsdis doz 10 % |
| 10 | Wire. |
| - | Brass and Copper, new list. Jan. 18, 1884dis 20 % |
| 20 | Market, Bright and Annealed, Nos. 0 to 18dis 65 % |
| 3 | Market, Coppereddis 60 % |
| 77 | Market, Galvanized |
| 40 | Market, Tinned, Tinned list |
| 8 | Stone, Bright and Annealed Nos. 19 to 20dis ooci79 2 |
| 8 | Stone, Gelwanted Nos. 10 to 30 dis 50 d |
| 10 | Stone, Galvanized, Nos. 19 to 30 |
| | Tinned Broom Wise dis 60 < |
| 10 | Cast Steel Wire dis 50 ¢ |
| 10 | Annealed Fence Nos 8 2 0 dis 65 5 |
| | Annealed Grape, Nos. 10 to 14 dis 65 \$ |
| 16 | Fence Stanles W % 5@5346 |
| 80 | Fence Staples, Galvanized # \$ 6@6546 |
| 36 | Stubs' Steel Wire \$6.00 to £, dis 30 % |
| | Barb Fence |
| d | Wire on Spoolsdis 40 % |
| 2 | Steel Music Wire, Nos. 7 to 30\$1.00 ₩ % |
| 8 | Picture Wiredis 40&10 % |
| 500 | Clothes Line Wire, Galvanized 2 coil 25¢ @ 40¢ net |
| 1 | Wire Cloth, green, drab and black, \$\mathbb{P}\$ 100 sq. ft. |
| 55 | Wire. Wire. Warket, Bright and Annealed, Nos. 0 to 15. dls 65 5 Market, Coppered. dls 65 5 Market, Tinned, Tinned list dls 55 5 Stone, Bright and Annealed Nos. 19 to 28. dls 65 67 5 Stone, Bright and Annealed Nos. 27 to 36. dls 65 67 16 5 Stone, Bright and Annealed Nos. 27 to 36. dls 70 62 10 5 Stone, Galvanized, Nos. 19 to 29. dls 65 67 16 5 Stone, Galvanized, Nos. 19 to 30. dls 50 5 Stone, Galvanized, Nos. 19 to 30. dls 65 6 Tinned Broom Wire. dls 65 5 Annealed Fence, Nos. 8 & 9. dls 65 5 Annealed Grape, Nos. 10 to 14. Whole 65 5 Annealed Grape, Nos. 10 to 14. Whole 65 5 Stone Stub's Steel Wire. Stone Staples, Galvanized whole 65 Barb Fence Staples, Galvanized whole 65 Barb Fence Steel Wire Nos. 7 to 30. Stone Mis 40 8 Steel Music Wire, Nos. 7 to 30. Stone 18 40 8 10 8 Steel Music Wire, Nos. 7 to 30. Stone 18 40 8 10 8 Clothes Line Wire, Galvanized. World 18 40 8 10 8 Clothes Line Wire, Galvanized. World 25 60 40 9 net Wire Cheb, green, drab and black, № 100 8 19. |
| % | Wrenches. dis 45 g American Adjustable dis 384 g Baxter's Adjustable dis 3854 g Baxter's Diagonal dis 10 dis 3864 g Coes' Genuine cash in 10 dis 786 g Coes' Genuine dis 6084 g Coes' Pattern, Mallenble dis 7084 g Coes' Pattern, Wrought dis 7084 g Girard Standard dis 70 g Girard Standard dis 70 g Glard Agricultural dis 70 g Bemis & Call's Patent Combination dis 20 g Bemis & Call's Merrick's Pattern dis 20 g |
| et | American Adjustable |
| 55 | Baxter's Adjustable "S"dis 331/3 % |
| % | Baxter's Diagonaldis 35&10 % |
| | Coes' Genuinecash in 10 days, dis 60&3 % |
| % | Coes' "Mechanics' "dis 60&10&3 % |
| % | Coes' Pattern, Malleabledis 70x15 % |
| % | Coes Pattern, Wroughtdis 70&10&10 % |
| % | Ofward Academic discount disco |
| % | Pomis & Call's Patent Combination dis 90 % |
| 8 | Pomis & Call's Manuak's Pattern dis 25 6 |
| 8 | Bemis & Call's Patent Combination dis 30 % Bemis & Call's Merick's Pattern dis 35 % Bemis & Call's Merick's Pattern dis 25 % Bemis & Call's Cylinder or Gas Pipe dis 40 % Aiken's Pocket (Bright) 80,00, dis 50&10 % The Favorite Pocket (Bright) 40 of \$4.00, dis 40 % Webster's Patent Combination dis 35 % Agricultural Wrenches, Eberhard dis 35 % Boardman's dis 25 % |
| 25 | Bomis & Call's Cylindor or Gas Pine dis 40 < |
| 26 | Alken's Pocket (Bright) 90 00 die 50810 € |
| est. | The Eavorite Pocket (Bright) W doz \$4.00, dis 40 % |
| 70 | Webster's Patent Combination dis 25 % |
| | Agricultural Wrenches, Eberharddis 3314 \$ |
| 20 | Boardman's dis 25 % |
| | Wingers. Per doz. |
| | Wingers. Per doz. |
| | Novelty, for Common Tube, No. 8, 11 inch 24 50 |
| | Excelsion for Stationary Tubs. No. E. 10 Inch 20 00 |
| d | Excelsior, for Stationary Tubs, No. F, 11-inch 48.50 % |
| 10 | Excelsion with Folding Bench, No. A. 10-inch 48.00 |
| 0 | Excelsior, with Folding Bench, No. B, 11-inch 52.50 |
| 0 | W ingers. Novelty, for Common Tubs, No. 2, 10-inch., 390.00 Novelty, for Common Tubs, No. 3, 11-inch., 390.00 Novelty, for Stationary Tubs, No. E, 10-inch 39.00 Excelsior, for Stationary Tubs, No. F, 11-inch 48.50 Excelsior, with Folding Bench, No. A, 10-inch 48.00 Excelsior, with Folding Bench, No. B, 11-inch 52.50 Universal, No. 296. S0.00 Universal, No. 33.00 |
| 0 | Universal, No. 2 |
| 10 | Excessior, with Folding Better, No. 8, 11-16-18-35-29 Universal, No. 24, 30.00 Universal, No. 28, 33.00 Universal, No. 8, 33.00 Section 20, 100 Section 20, 10 |
| 10 | Peerless No. 216 |
| 0 | Peerless No. 336 |
| 0 | No. 99 Improved 21/4 |
| | |

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ROUND BLADES, EBONY HANDLES. PACKED 1/4 DOZEN IN A BOX.

OTH OF BLADES.

1/5 inch.

3-10 inch.

4-10 inch.

3-10 inch.

3-10 inch.

3-10 inch.

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4-10 inch.

4

SOCKET SCRATCH AWLS.



Vith Birch and Maple Handles......\$21.00 Per Gross. | With Ebony Handles.................\$24.00 Per Gross
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Made of the best Jessops Steel, with Patent Wetal Socket.. The handles cannot get loose or come off, no latter what strain they are put to in using them. Guaranteed in every respect.

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Waterproof Belt Oil and Leather Preservative,

FOR WET AND DRY LEATHER BELTING.



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The Standard Belt Oil of the World.

Leather dressed with this oil will not crack or rot, as heat, cold, water or gas has no effect on it. It will spread one-third further and last much longer than any oil for the same purpose. It never turns rancid; will keep in any climate. Belts may be run in water at one end and a hot room at the other, and still be soft, dry and pliable. Warranted not to start gluelaps or gum on belts or pulley, and to keep the surface perfectly smooth.

Beware of Imitations Sold at a Cheaper Price, the Color of which is well Calculated to Deceive.

In their Treatise on Machine Belting, J. B. HOYT & CO. speak of Post's Oil as follows:

OILING OF BELTS.

"Care should be taken that belts are kept soft and pliable. For this purpose we decidedly advise the use of "POST'S WATERPROOF BELT OIL AND LEATHER PRESERVATIVE." When applied as directed, it makes the Belt smooth, pliable and adhesive, and causes it to hug the pulley closely, so that no power is lost from lack of pulley contact. It possesses excellent preservative qualities and also renders the leather more impervious to dampness than any article or preparation we know of.

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E. L. POST & CO.,

No. 10 Peck Slip, New York, sole manufacturers.

WHOLESALE METAL PRICES, August 6, 1884.

| METALS. | LEAD.—Dury: Pig, \$2 \$2 100 to; Old Lead, 9 to; Pipe and Sheet, 3¢ \$2 to. |
|--|--|
| IRON.—Dutt: Bars, 8-10¢ to 11-10¢ % b; pr | D : Fipe and Sneet, se w in. American Bar 4½ @ 4 |
| 180N.—Duty: Bars, 8-10¢ to 11-10¢ ₩ ħ; pr vided that no Bar Ironshall pay a less rate of du than 35%. Sheet, 11-0¢ to 15-10¢ ₩ ħ. Band, Hot and Scroll, 1¢ to 14-10¢ ₩ ħ. Bailroad Bars weig ing more than 25 ħ ৠ yard, 7-10¢ of 1¢ ₩ ħ. | Tin Lined Pipe |
| American Iron. Foundry No. 1 | ANTI HONY. Hallett's. Cookson "11½ @ 11 |
| Scotch Iron. | ₩ 100 lbs. |
| Carabroe \$\psi\$ ton 30.50 & 21. Coltness \$\psi\$ ton 62.15. Shotts \$\psi\$ ton 21.50 & 22. Glengar nock \$\psi\$ ton 20.50 & 21. Gartsb strie \$\psi\$ ton 21.00 & 22. Langloan \$\psi\$ ton 21.50 & 22. Summeriee \$\psi\$ ton 20.75 & 21. Dalmellington \$\psi\$ ton 40.07. Eginton \$\psi\$ ton 49.25 & 419. Clyde \$\psi\$ ton 6 90.4 | 50 American, cash |
| Gertsb strie | 50 600 b casks |
| Dalmellington \$\psi\$ ton \$\pri\$ 20. Eglinton \$\psi\$ ton 19.25 \$\pri\$ 19. Clyde \$\psi\$ ton \$\pri\$ 30. | Zine Tubing—Dis. 25 s. Plain |
| Rails. Steel, at Eastern mills | Scotch and Extra Patterns |
| Scrap. Wrought, \$\partial \text{ton, from yard 20.00 @ 21.00} | O WIRE. |
| Bar Iron from Store. | Nos. 00 to 9, 70, 11, 12, 13, 14, 15, 16, 17, |
| #4 to 1 in. ro und and square } # B 2 @ 2.10 1 to 6 in.x% to 1 in | Bright Market Wire. dis 6: Charcoal dis 47/4 Bale Wire, Nos. 7 to 12. dis 6: |
| 1 to 6 in.x % to 1 in | Annealed Market Wire |
| Refined Iron: % to 3 in. round and square p b 2.10 @ 2.22 1 to 6 in. x % to 1 in 1 to 6 in. x % to 1 in 1 to 6 in. x % and 5-16 p b 2.20 @ 2.45 Rods—% and 11-16 round and sq. p b 2.20 @ 2.35 Bands—1 to 6x2-16 to No. 12 p b 2.50 @ 2.66 "Burden's Best" Iron, base price p b 3.6 Burden's "H. B. & S." Iron, base price p b 2.6 Norway Nail Rods 514 @ 6 | Coppered Market Wire dis. 60 Bale Wire, Nos. 7 to 12 dis. 60 Galvanized Market Wire. |
| Sheet Iron.—From Store. Common R. G. American Cleaned. | Stone or Weaving Wire. Nos 16 17 18 19 20 21 22 23 24 25 |
| Nos. 10 to 16 | Nos. 16 17 18 19 20 21 22 23 24 25 Cents 14 15 16 19 20 21 22 23 24 25 Nos. 27 29 29 30 31 32 33 34 35 36 Cents 29 29 30 32 23 35 37 45 56 Nos. 16 to 18 dis. 621/2 66 65 19 to 26 65 27 to 36 67 19 10 36 10 10 10 10 10 10 10 10 10 10 10 10 10 |
| 25 and 26 | Nos. 10 to 18 |
| Galvanized, 21 to 24 | Steel Wire. Cast Steel, Stee Wire listdis. 50 |
| Sheet Iron. — From Store. Common R. G. | Brass and Copper Wire. Old English Gauge the Standard.—Dis 20. Gildin |
| American Cold Rolled B. B D D 5 6 6 7 6 Iron Wire. See Wire. | Common High Low and Brass Copper |
| | All Nos. to No. 16, inclusive \$0.22 \$0.25 \$0.25 \$0.17 and 1825 .25 .25 .25 .25 .25 .25 .25 .25 |
| STEEL.—Dury: Ingota, Bars, Sheets, &c., valued at 4章 形 for less, 45 % ad. val.; valued above 4章 and not above 7章 形 for less から 2章 形 for valued above 7章 and not above 10章 形 for less for it valued above 10章 形 for less.—Steel Bars, Roda &c., cold hammered or poliahed, in any way is addition to ordinary hot rolling, 15章 形 for addition to above; Steel Circular Saw Plates, 1章 形 for addition to the above. | * 21 |
| tion to above; Steel Circular Saw Plates, 1¢ W R addition to the above. | |
| American Cast Steel. For American Steel, see Pittsburgh quotations. English Steel. | " 29 |
| Best Cast | 30 40 10 10 10 10 10 10 10 10 10 10 10 10 10 |
| Round Machinery, Cast. \$\ \mathbb{D}\$ 10\\\ \mathbb{D}\$ 8waged, Cast. \$\ \mathbb{D}\$ 15\\\ \mathbb{D}\$ 5 15\\\ \mathbb{D}\$ 8 15\\\ \mathbb{D}\$ 15\\\\ \mathbb{D}\$ 15\\\\ \mathbb{D}\$ 15\\\\ \mathbb{D}\$ 15\\\\\\\\mathbb{D}\$ 15\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | 4 34 |
| German Steel, Bost. P D 10 ¢ 2d quality P D 9 ¢ | 304 |
| Best Cast | Spring Wire, 2 cents per pound advance. White ened Wire, 5 cents per pound advance. Flat, Square and Half-Round Wire, 4 cents advance on Round Wire. Fancy Wire, not less than 10 cents advance or Round Wire. Spooling on one-pound Spools, 12 cents per pound extra. Spooling on ten-pound Spools or more 2 cents per pound extra. |
| 14 90 th . Barn Block and Pigs free | Round Wire. Spooling on one-pound Spools, 1: cents per pound extra. Spooling on ten-pound Spools or more 2 cents per pound extra. |
| Banca | MISCELLANEOUS TINNERS' STOCK. |
| Charcoal Tin Plates. IC 10x14 225 sheets | 16 & 36, Warranted 13 @ 1334 Extra 114 @ 15 No. 1 Refined 1036 @ 15 No. 2 |
| I C 12x12 (12x12) (12x | Rivets. |
| D C 1314x17, 100 " 5.25 6 5.75 D X 1314x17, 100 " 6.75 6 7.50 For each additional X add 6 1.50 1.50 | Iron and Tinned, new list, Dec. 10, 1881 dis. 40 g In bulk, new list, Dec. 10, 1881 |
| Coke Tin Plates. Best. Ordinary. I C 10x14 | Stove Bolts, |
| IC 10x14 \$5.50 \$5.10 @ \$5.25 IC 14x20 5.25 @ 5.375 IC 12x12 5.25 @ 5.375 5.25 @ 5.375 IC 10x20, gutters, 225 sheets 8.25 5.25 @ 5.375 7.75 IC 20x26, I12 sheets | American Screw Co.'s |
| Terne Plates. | Prices current per box of 50 feet. List, July 2, 1663. |
| IC 14x20 M. F. 7.25. IC 14x20 Tregoning, Old Process | Sizes. 1st. 2d. 3d. 4th. |
| I X 14x206.50 @ I C 20x2810.50 @10.00 @ 10.25 9.75 @ 10.00 I X 20x2813.00 @ 18.50 | 6 x 8 to 10 x 15 |
| Tin Boiler Plates. | 15 x 36 to 34 x 30 |
| IXX 14x28, 2 " No. 8, " @ 14.50 | 90 x 65 to 30 x 56 |
| COPPER.—DUTY: Pig, Bar and Ingot, 4¢: Old Copper, 3¢ \$\ \mathfrak{b}\$ \$\ \mathfrak{b}\$. Manufactured (including all articles of which Copper is a component of chief value), 35 \$\ \mathfrak{c}\$ at valorem. | Double. |
| value), 35 % ad valorem. Ingot, Lake. Ingot, Baltimore. Brazzers' Copper, ordinary sizes, 16 oz. Weo, ft. and over. 2 2 # | Sizes. 1st. 3d. 3d. 4th. 6 x 8 to 10 x 15 \$17.50 \$15.00 \$14.00 \$12.00 |
| Braziers' Copper, ordinary sizes, | 6 x 8 to 10 x 15 |
| Braziers' Copper, 10 oz. and 12 oz. ♥ sq. ft | 26 x 36 to 26 x 44 |
| under 16 oz. and over 12 oz. 9 80, ft. "94 Braziers' Copper, 10 oz. and 12 oz. 9 sq. ft. "97 Lighter than 10 oz. 9 sq. ft. 92 Circles less than 84 in. in diam. 92 84 in. diam. and over 93 62 63 63 64 65 65 65 65 65 65 65 65 65 | 94 x 58 to 34 x 60 |
| Sheathing Copper, over 12 oz. | Sizes above—\$15 per box extra for every 5 inches. An additional 10 per cent. will be charged for all flass more than 40 inches wide. All sizes above 52 inches in length, and not making more than 51 united inches, will be charged in the united 84 inches brucket. Discount 75 and 5 |
| Tinned Sheathing, 14x48, 14, 10, 18 oz. 23 # Nickel-Plated Sheathing, 16x bolless 0 35 # | united inches, will be charged in the united 84 mches bracket. Discount 75 and 5. |
| Plating extra | PAPER STOCK, &c. |
| Tinning. | (Dealers' Selling Prices.) Cents * 8. White Shirt Cuttings, No. 1 |
| 4x48, by the case | Mill Assorted Whites. 54 6 5 5 6 6 5 6 5 6 6 5 6 6 5 6 6 5 6 6 5 6 6 5 6 |
| D'Neill's Patent Plantshed CopperNet. 12 and 16 oz. and heavier 35¢ by the case. \$\mathbb{P}\$ b 34¢ 12 oz. and lighter | Mill Assorted Whites 54 6 5 5 6 6 5 6 6 5 6 6 5 6 6 5 6 6 5 6 6 5 6 6 5 6 6 5 6 |
| Boiler Sizes. 7 in., 14x52. 8 in., 14x50. 9 in., 14x60. 4 and 16 os. and heavier.87\$ By the case. 10 2 36\$ | Cottos Canvas # 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 |
| (And all sizes not over 20 in. wide,) 4 and 16 oz. and heavier | Colors, @ cwt. 40 @ 50 Manlia Rope. 2% @ 3 "Tarred. 2% @ 2½ Gunny Bagging, No. 1. 14 @ 2 |
| Copper Wire(See Wire.) | No. 9 |

BRASS AND GERMAN SILVER.

Brown & Sharpe's Gauge the Standard for Metal; Old English Gauge the Standard for Wire.

Yellow Sheathing Metal, W B

| | | _ |
|--|--|----------------|
| De 1 | Bogus Manilas and Hardwares | 1 |
| 4 | Binders' Board Cuttings % @ | 1 |
| 434 534 40 20 20 | A | |
| 80 | Paints. | |
| 7 | Black, Lamp—Coach Painters' 9 32 6 2 | 66 |
| 1340 | best. Black Paint, in oilkegs, 8¢; assorted cans, 1 | 30 |
| 134 | O Chinese dry | 5¢ |
| 344 | Brown, Spanish. | 20 |
| lbs | " in oil | 5¢ |
| 1 m | in oil | 10 |
| 10 1 | Purple | 30 |
| .25 | Red | 90 |
| .86 | Mineral Paints | 1¢ |
| 361 | Red Lead, American. "Venetian (Eng.) dry | 70 70 8¢ |
| | " Indian Dry | 3 |
| 18. | Sienna, American Raw, powdered | 10 |
| 16 5 % | Umber, Burnt, powered 11 @ 15 @ 2 | 5¢ 8¢ |
| 8 % | " In oil | 100 |
| 3 % | Vermilion, Chinese | 10 |
| 0 % | White Lead, American, pure dry | 10 |
| 0 % | White Paris, English Prime 18 011 | 40% |
| 0 % | " in oilasst'd cans, 11¢; kegs, 8 " Vermont | 00 |
| 00 | Yellow Chrome | 6.64 |
| 26 26 | " No. 1, in oil | 0.0 |
| | 0 in oil10 @ 11 | 0 |
| 6 X | Linseed, Raw, in caaks and bbls | 00 |
| × | French (Paris Dry) | 8 9 |
|) × | 8ignal | 0 |
| | Prime Lard 59 No. 1 Extra 59 West Viscous 2 | 00 |
| ng ze | Drilling | 0 |
| Mr. | Fish Oil, Pressed | 0 |
| 30 | Empire Cylinder Oil | |
| 81 | Engine 50 | 1 |
| 88 84 | Asphaltum, Cuban .64 @ 94 | il |
| 36 38 | Bensine W gal. 8 @ 10cChalk | 1 |
| 40 | Dryers, Patent Americanasst'd cans, 9¢; kegs, 7c Frontings. | |
| 46 | Prostings | 11 |
| 04 02 07 | | 1 |
| 78 88 88 | Shellac, English | |
| 95 | Mineral Wool, ordinary, F b 16 146 | 1 |
| 90 50 70 | Pumice Stone, selected Lumps. 4 @ 6¢ powdered \$2.75 | |
| 00 00 00 00 00 00 00 00 00 00 00 00 00 | Pumice Stone, selected Lumps | |
| 2- | Rosin—Common and Good—Strained. \$2.100 | 1 |
| e d | G & H. \$2,30 @ \$2,50 I & K. \$2,60 @ \$2,80 | 1 |
| 12 | M&N | 1 |
| d | Waste, No. 1 Cop | 1 |
| | Waste, No. 2 White Machine | |
| 9 | Waste, Washed Machine | 1 |
| on il | | |

| INTERCHANGEABLE |
|---|
| LOCK-CORNER SHELF BOXES. Serew Cases, &c., FOR THE HARDWARE TRADE |
| S. H. GREEN, 19 Murray St., New York. |

McMaster's Universal Box Strap and Corner Irons.



| and on the Farm. List price, so cents per 100. |
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| McMASTER'S SHELF SUPPORT. |
| Patented Jan. 10, 1882, and patent applied for on improvement. Por Shelving Stores, Bookcases, Butieries, &c. A perfect seif-saus- taining Bracker. Shelves practically ad- justable and guaren- ered to anstall 1-4 |
| Cheaper than any other method of shelving. An dadoing, no cleats, and no nails required. |
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METAL PATTERN MAKERS AND JAPANNERS.

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Elizabethport Steam Cordage Co., MANUFACTURERS OF MANILA, SISAL AND TARRED

CORDAGE OF ALL KINDS BINDER TWINE A SPECIALTY.

English Letter.

(From Our Regular Correspondent.)

LONDON, July 21, 1884. THE OUTLOOK

last report. Business in general continues dull, and there is no decrease whatever in the competitive underselling to which I have so often alluded. All values are depressed, and for the most part inclined to even lower levels than those already reached. Profits are meager as a rule, and credit is subjected to such close scrutiny that it is virtually restricted. On the other hand, failures are few in number and not for large amounts, so that there is good reason for entertaining the hope that business is on a sound basis, and there is no suspicion whatever of inflation. It is true that present statistics as to failures are open to question, seeing that since the coming into operation, with this year, of the new Bankruptcy act there is believed to have been a remarkable increase in the number of what are termed "private a debtor, in order to avoid the publicity and severe examinations which would be inevitable were he to resort to the Bankruptcy Court, calls his creditors together privately. is very much the same as at the date of my a debtor, in order to avoid the publicity and severe examinations which would be inevita-ble were he to resort to the Bankruptcy Court, calls his creditors together privately and induces them to release him from his debts in consideration of a prompt payment of so much in the pound, rather than have the delays, risks and costs of the bankruptcy procedure. In many instances creditors prefer this summary way out of difficulties, and accept the compositions offered. One dissentient, however, may upset the whole scheme, and unless he can be bought off the failure must take place in the usual manner. The great mischief of these private arrangements is that they pressure and and the scheme that it has the pressure and the scheme that the theory are supported to describe the scheme that the sc ments is that they pass unrecorded, and the debtors so released from their liabilities may go on afresh without the world in general being any the wiser for their lapses. This is felt to be a serious drawback, and efforts are being made to induce the authorities to make the registration (at least) of such arrangements compulsory and prompt.
Some dissatisfaction and discussion have

arisen here in consequence of the alleged discrepancies between the charges of the United States consuls in Great Britain and in France. It is said that in London and elsewhere in this country the charges of the American consuls are 15/, being 10/6 for certification and invoices and 1/6 each for affidavits in triplicate, or an additional 1/6 act for affidavits in triplicate, or an additional 1/6—16/6 in all—if the affidavits are quadruplicated. In Paris the total charge for certification of invoices and affidavits is 13 francs, or equal to about 10/6d. English manufacturers are asking, therefore, why they should be charged more for the privi-leges of your consuls than are French manu-facturers or exporters for exactly the same

services.

The annual show of the Royal Agricultural Society took place last week at Shrewsbury, with fine weather and large attendance, over 50,000 persons being present on each of the "shilling" days. The collection of machinery and implements was a good one, but the business done was not large. Many American implements—such as reapers, mowers, lawn mowers, forks, shovels, and so on—were shown, chiefly by such houses as Rollins, Lankester, Lloyd, Lawrence & Co., Churchhill & Co., &c. Prizes were offered for ensilage machinery, but no award was made, as none of the competing articles reached the required standard. Trials will shortly be made of self-binding reapers, for which the Walter Wood, McCormick, Johnstone and other American machines will be to the fore, with good prospects of carrying off the prize.

The weather of the week has been good, on the whole, although heavy showers of rain have fallen in some parts of the same the continued inanimation of the market, but, like Micawber, they are confident that something will turn up before long. Meantime, the public hold alcof and will not come to the rescue of the ring, who are now the principal holders of warrants—much to the chagrin of most of them. There are now 115 furnaces in blast in Scotland, as compared with 96 this date last year, the output being thereby lessened to the extent of 3600 or 2800 tons weekly. In Connal's Glasgow stores there are now 588,066 tons (a reduction of 325 tons last week), as against 585,171 tons this date in 1883. The shipments to date are 33,447 tons in arrears, while the pig-iron importations from Middlesboro' into Scotland have decreased by 4315 tons.

MIDDLESSORO' PIG IMON is sluggish and nominal at about 36/9 @ 37/ for No. 3 and G.M.B., f.o.b., at makers' wharves in Tees, less 2½, 10th of following month, as under:

THE METAL MARKET

has been quiet during the week, but there appear to be a fair number of transactions as the result of negotiations inaugurated at pig iron and 2315 tons steel rails. as the result of negotiations inaugurated at the quarterly meetings. These transactions have been in respect of raw materials and pig iron for the most part, the buyers of flinished iron being indisposed to apsculate or to anticipate legitimate requirements to any appreciable extent. The meetings of last week were productive of very little new business, indeed, at the time, and, on the whole, may be counted as being among the dullest of such gatherings for some years, as the moment is considered only moderately good, although harvest prospects are promising. Should the crops be reaped in good condition, a certain amount of money would doubtless be circulated, but it will need more than one good narvest to restore British agriculture to even a moderately prosperous condition. At Glasgow the market has been without other than nominal movements, a quiet tone pervading warrants, which closed on Thursday at 44/3½ \$\frac{1}{2}\$\$ less more as a finite of the same time last year; the figures were 35, and 29,05 tons respectively."

The fifth annual meeting of the United Stabas Association of Charcoal Iron Workers will be held at \$1. The fifth annual meeting of the United Stabas Association of Charcoal Iron Workers will be held at \$1. The property and the part of the consumers. In the other smelting districts crude iron is dull and irregular, with overwind and one by boat on the Miscaissippi River districts crude iron is dull and irregular, with overwinding the most localities. the quarterly meetings. These transactions have been in respect of raw materials and

Heavy manufacturered iron is in fair demand as regards other than shipbuilding sorts, but there is no activity in any quarter. Fencing wire is dull and weak. The same remark applies to galvanized iron, in which competition is so severe that a new attempt seeing made to effect an organization which shall put a stop to underselling. Ordinary finished iron is quiet and irregular, the busi-ness doing being chiefly in medium and com-

quotations, but new orders are very scarce. In tin plates there is no movement of im-In the plates there is no movement of importance, but prices are firm. Messrs. Caine & Layborn, Liverpool, say: "The Birmingham meeting was not marked by any special feature; only a moderate business was transacted. Cokes, in quantity, for forward delivery, were not to be obtained except at a slight advance on recent figures. Cokes here for promot delivery as receivity. except at a slight advance on recent figures. Cokes here for prompt delivery are readily bought up at 15/@ 15/3. Steels of the various descriptions are in fair demand, but charcoals at present are somewhat neglected. Stocks continue to decrease, and, as makers are in most cases believed to be fairly booked ahead, prices are not likely to remain at the present level, especially as the autumn months usually show more briskness in the trade." They quote, all less 3 % for cash, as under:

| under: | | | | |
|----------|----------|--|----|------|
| - | | ₩ bo | x, | I.C. |
| Crown e | xtra be | est charcoal19/ | 0 | 19/6 |
| Best ch | arcoal | (best soft steel, good | _ | |
| charec | oal con | ting)18/ | 0 | 18/6 |
| Best ste | el, good | d coke finish | 60 | 17/ |
| 965 61 | CON | 15 /dl | 25 | 10/ |
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| 88 | 66 | 14 14×90 14/8 | 8 | 14/8 |
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| | | and the same and t | W | 10/0 |
| | | Terne Plates. | | - 1 |
| Charcos | d | I.C.W. 14x2013/3 | 60 | 18/9 |
| 6-6 | | I.C.W. 28x2027/ | à | 27/6 |
| | | SCOTCH PIG IRON | | |
| | | | | |

has varied very little indeed on the week, the margins on warrants having been most meager, and therefore disappointing to specu-lators. The members of the Glasgow "ring" are reported to be heartily disgusted with the continued inanimation of the market, but, like Micawber, they are confident that something will turn up before long. Mean-time, the public hold aloof and will not come

| Z november. | | No. 1. | No. 2. | No. 8. |
|-----------------|----|--------|--------|--------|
| Cleator | ** | 47/6 | 47/6 | 47/6 |
| Lonsdale | | 47/ | 46/6 | 46/ |
| Workington | | 45/ | 44/6 | 44/ |
| West Cumberland | | 45/ | 44/6 | 44/ |
| Lowther | ** | 45/6 | 45/ | 44/6 |
| Distington | | 45/6 | 45/ | 44/6 |
| Harrington | | 47/6 | 46/ | 45/ |
| Solway | | 45/ | 44/6 | 44/ |
| Maryport | | 46/ | 45/6 | 45/ |
| * | | Y | | |

COPPER REPORT.

steel industries of St. Louis and vicinity. The local committee propose that visiting members shall be at no expense, except their hotel bills, after arriving in St. Louis, and contemplate closing the meeting by a com-

HARDWARE NOVELTIES.

Michelson Patent Trunk Caster.

The Michelson Manufacturing Company, Limited, of 66 Wisconsin street, Milwaukee, Wis., are the manufacturers and sole own-ers of the Michelson "None Such" Patent Trunk Caster. A perspective view of the caster is shown in Fig. 1. The caster, when applied to a trunk, is sunk in the bottom strip, so as to leave the roller projecting, after which the plates of the corner iron are atter which the plates of the corner from are fastened to the trunk in the usual manner. Referring to Fig. 2, we see the caster with the top plate removed, showing the arrange-ment by which a rotation in two mutually perpendicular planes is accomplished. The caster consists of a well, A, made of cast iron, in the center of which, and of one



A', the hole in the center being made to receive the bolt or nut that secures the removable face-plate to the caster. The central shank is turned down to such a diameter as to make an easy-working bear-ing for the arm B. The shank is not reduced to the same diameter for its entire length, but is left with a shoulder at the bottom that serves as a bearing for and also keeps the arm B from scraping on the bottom of the well A when rotating. The arm B is cast with a slot in it for the roller C, and at the sides are cast two slight depressions which serve as bearings for the spindle sions which serve as bearings for the spindle on which C runs. The hole in B, for receiving the shank A', is milled out, thus giving a more accurate fit, besides a smoother bearing surface. C is a roller of cast iron which rotates on a loose spindle made of a piece of iron or steel wire cut to the required length. Beferring again to Fig. 1, we see that the face-plate has a slot in it through which projects the roller C. The face-plate,

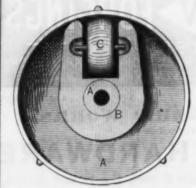


Fig. 2 .- View with Surface Plate Reversed.

which is made of malleable iron, has two which is made of malleable iron, has two lugs on the inside, one on each side of the alot receiving the roller, and these lugs, bearing against the arm B, prevent the face-plate from pressing against the roller C, and thus interfering with its free revolution. The arm B is raised very slightly above the sides of the roll, thus affording a bearing on which the face-plate way rest and revolved. which the face-plate may rest and revolve without striking the sides of the well A. It is in this manner that the double rotation is accomplished, the roller C rotating in a vertical, and the arm B in a horizontal, are offering to the trade a new form of Doorvertical, and the horizontal, are offering to the trade a new form of Doorvertical, and the horizontal, are offering to the trade a new form of Doorvertical, and the horizontal, are offering to the trade a new form of Doorvertical, and the horizontal, are offering to the trade a new form of Doorvertical, and the horizontal, are offering to the trade a new form of Doorvertical, and the arm B in a horizontal, are offering to the trade a new form of Doorvertical, and the arm B in a horizontal, are offering to the trade a new form of Doorvertical, and the arm B in a horizontal, are offering to the trade a new form of Doorvertical, and the arm B in a horizontal, are offering to the trade a new form of Doorvertical, and the arm B in a horizontal, are offering to the trade a new form of Doorvertical, and the arm B in a horizontal, are offering to the trade a new form of Doorvertical, and the arm B in a horizontal, are offering to the trade a new form of Doorvertical, and the arm B in a horizontal, are offering to the trade a new form of Doorvertical, are offering to the trade and the arm of the properties of the trade and the arm of the properties of the propertie pany are at present able to turn out zooo show the way it is applied to a door, and also tion. sets of these trunk casters per day. They are also preparing to put on the market, in about two months, a large line of furniture

Special sizes are made to order. The its manner of working. Referring to Fig. 1, capacity of these sash balances is capable of the cut represents a door locked with the being increased or diminished within certain Payson door jamb bolt. The bolt is let in power, or letting it off a round or more to di-minish its power. Small adjustments are made by means of the spring brake which is shown above the drum in the engraving. By increasing the tension of this brake, which is



The Shumard Sash Balance.

readily done by means of a screw, and which can be accomplished after the bal-ance is in place in the window frame, variations of r pound or more are readily

The Columbia Swing Spring.

all riding is either vertical, lateral or fore and aft, or a combination of two of these. The wheel itself and its free-dom of motion relieves sufficiently the lateral jar, it has been found; and lateral yield in the spring, to any con-siderable extent, gives an un-steadiness of the seat which has condemned for most riders several otherwise good

riders several otherwise good springs. The ordinary botted clip spring is, where well made, sufficient relief from the vertical jar. But the fore-and-aft jarring caused by meeting obstructions to the large wheel, and the constant vibration of the small wheel, has, it is said, hitherto found on efficient relief except with springs otherwise objectionable. This last difficulty the Columbia swing spring is designed to overcome by means of two pendent links combined with other parts in a peculiar way, as shown in the cut, so as to allow a fore-and-aft motion of the seat to a limited but sufficient extent of the seat to a limited but sufficient extent to stop vibration, and to ease the rider over considerable obstructions. As a safety device for averting headers, it is claimed to be of



The Columbia Swing Spring.

great value. This spring is only applicable to the "Expert" Columbia bicycle, and on that machine is readily interchangeable for the one usually sold with it heretofore.

limits. This is done by passing the ribbon the edge of the casing with the screw-plate once more around the drum to increase its flush with the door frame, the casing for the

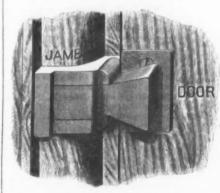
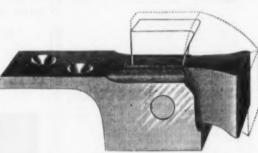


Fig. 1.—Payson's Door-Jamb Bolt Applied.

piece of metal, is secured to the face of the door at the place where the bolt catches, thus protecting the door from injury. From Fig. 2 some idea may be gathered of the construction and manner of operating the bolt. The bolt consists of a frame box made in two pieces and united text these in two pieces and united together. At one end is a screw-plate for fastening it to the door, while the other end is slotted to receive the bolt piece, which is pivoted through the center, as shown in the cut. Fastened to the bolt piece is a spiral spring which at every quarter revolution draws it into the slot until rests in recesses at the back or bottom of The Pope Manufacturing Company, of Boston, Mass., have brought out a new bicyle seat spring, represented in accompanying cut, and known as the Columbia Swing Spring, which they describe as the combination of three different inventors toward the solution of the difficult problem in bicyle seat springs. The jar incident to all riding is either vertical.



town, Pa., dated July 31, says: "The Le-high Valley Portland Cement Company, a corporation of the State of New York, some corporation of the State of New York, some years ago became the owner of the lease from Aaron and Ephraim Troxell upon their farm in Whitehall Township, near this city. Buildings, machinery and a factory were erected at a cost of \$45,000. Some time ago the New York banks declined further discounts, and called in outstanding loans. This and some litigation in the City of New York has made the company short in cash. A number of foreign attachments were is A number of foreign attachments were issued in the Common Pleas of Lehigh County for material and machinery, aggregating \$6000. To-day a confessed judgment to one of the company for \$33,000 was also added. Prior to all these liens is a mortgage for

This week has been prolific of big gas "strikes" in Western Pennsylvania. On the 4th inst., at Pittsburgh, the well on the property of Park, Bro. & Co., struck a heavy flow of gas at a depth of 1075 feet. On the 5th the Penn Tunnel Company made a strike at Homewood, within the city limits of Pittsburgh, which is said to equal the celebrated Westinghouse gas well. On The Payson Manufacturing Company, of the celebrated Westinghouse gas well. On 1319 to 1325 West Jackson street, Chicago, are offering to the trade a new form of Doorgas well in Westmoreland County was struck

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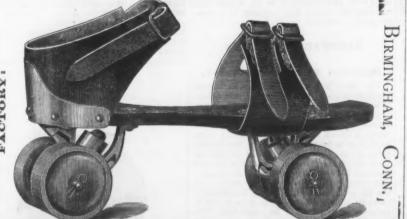
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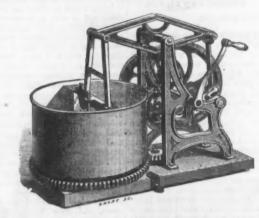
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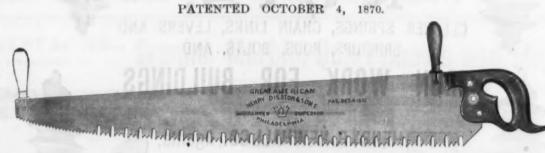
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GREAT AMERICAN TOOTH.



In presenting this saw for your consideration, we state that it has been subjected to the most severe tests to which cross-cut saws can be put, proving to the user and ourselves that it is the best cross-cut saw for general use ever offered to the public. It has given unbounded satisfaction wherever used. We are daily receiving numerous orders for them, sales of the GREAT AMERICAN SAW during 1883 reaching 25,000; in fact, some sections of the country will use no other style. The manufacturers take pleasure in saying that there is no saw in the market by which so much work can be done in ten hours with so little labor as with the GREAT AMERICAN CROSS-CUT SAW. It is made of a superior quality of steel, temper and finish. They are ground by new and improved machinery, making them a true taper from teeth to back, the back being fully four gauges thinner than the teeth, which enables them to run with less set and greater ease than any other saw in the market.

WITH SUPPLEMENTARY HANDLE.



The above cut represents the GREAT AMERICAN ONE-MAN CROSS-CUT SAW with Supplementary Handle. This saw is made of the same steel and on the same principle as the celebrated No. 7 Hand-Saw.



We recommend the use of the GREAT AMERICAN CROSS-CUT FILE for keeping the teeth of the above saws in their exact shape in which they leave our works.

Fig. 1 shows the manner of filing the long edge of the end tooth.

Fig. 2 shows the manner of filing the short or inside edge of the end tooth.

Fig. 3 shows the section of the file in the guller of the saw.

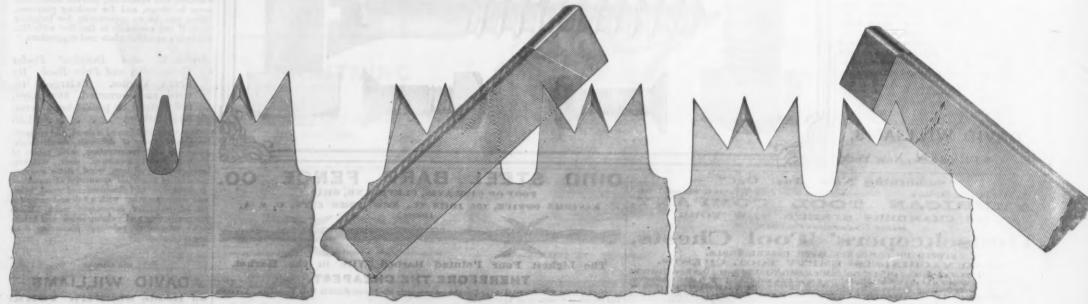


Fig. 3.

Fig. 1.

Fig. 2.

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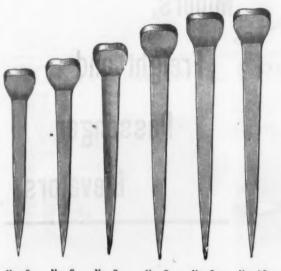
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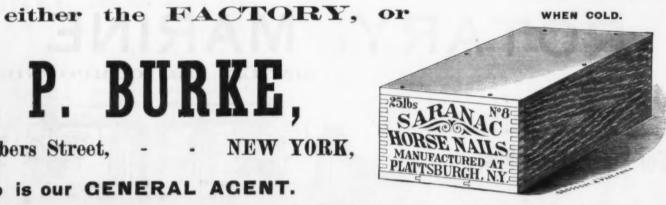
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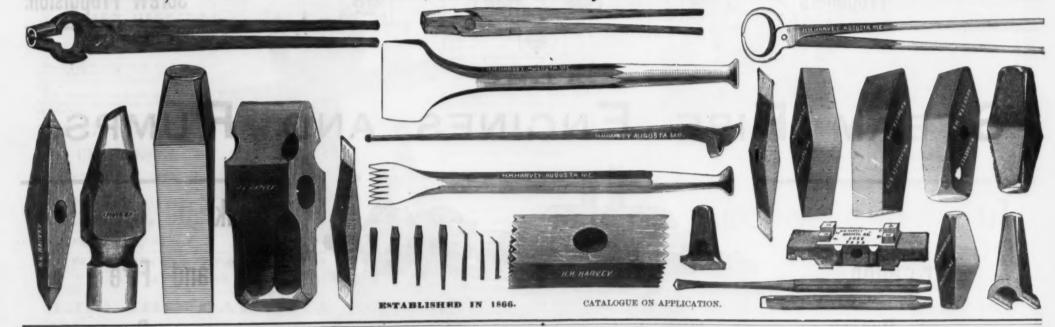
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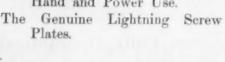
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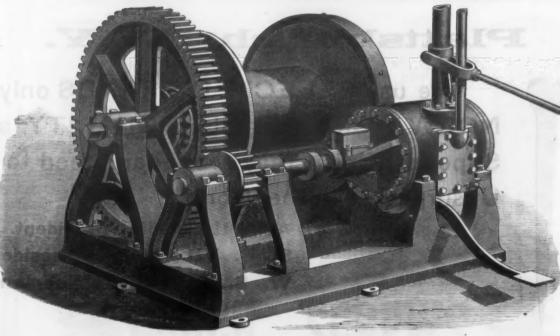
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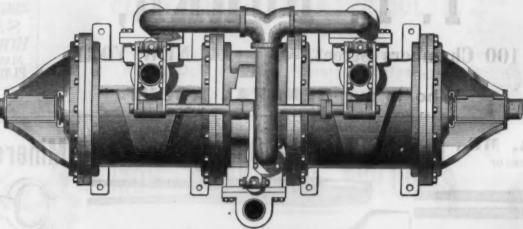
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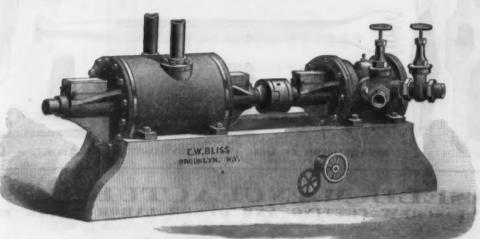
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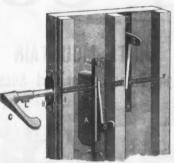
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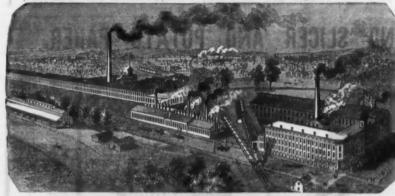
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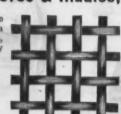


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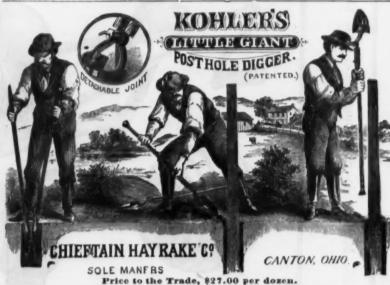
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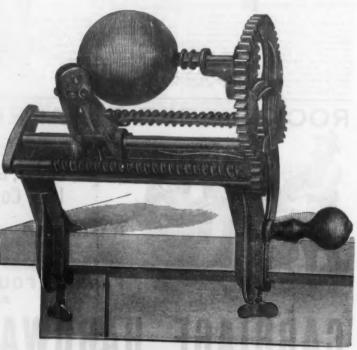
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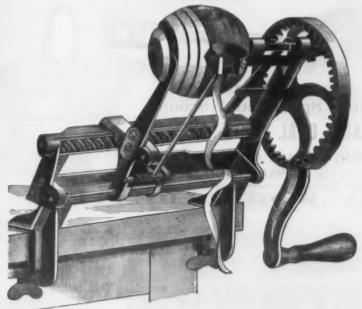
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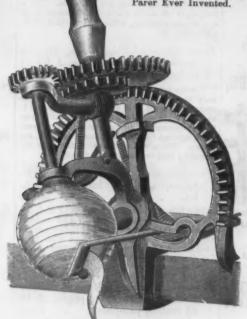


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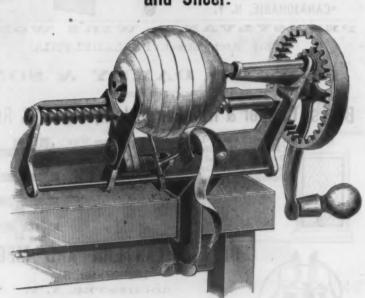


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IRON, STEEL AND METAL-LURGY.

Bloxam .- Metals; Their Properties and Treatment. By Prof. C. L. Bloxam: 105 illustrations, 312 pages, 12mo, cloth; 1872. . \$1.50 thor distinguishes the properties of the useful metals and their mechanical preparation in such a practical manner that the chemical principles involved may be clearly under-stood

pages, 12mo, cloth 52
This work treats of the physical properties of iron ores, and the most approved means of reducing them to the purposes of the manufacturer. The methods of assay and analyses of iron ores are practically considered, as also their composition and distribution. The subject of blast furnaces, their capacity and production has also received careful attenproduction, has also received careful attention. In the present edition the author has added to the chapter on Steel Making, and has explained and illustrated the progress recently made in the process of steel manufacture, both of Signature 1. facture, both of Siemens and Bessemer, especially the latter, by the adoption of lime as a dephosphorizing agent. The book also contains a chapter on the mechanical properties and tests of Malleable Iron and Steel. The

prising the practice and theory of the several methods pursued in their manufacture, and of their treatment in the rolling mill, the forge and the foundry. By W. H. Greenwood; 97 illustrations, 536 pages, 12mo, cloth. . . \$2

This work satisfactorily presents in conone of the recent improvement in convenient form the most important processes employed in the manufacture of iron and steel. The illustrations are in most cases reduced from actual working drawings. The style is simple and clear. Although many of the recent improvements in American practice have not received the thorough attention which they merit the look treating seasons. which they merit, the book treating more particularily of English practice, the author has succeeded in producing a comprehensive manual for the technical student, and an in-telligible and valuable assistant to the practical iron-worker. The chapter headings are

as follows:

Explanation of Terms; Refractory Materials, Crucibles, &c.; The Ores of Iron; Metallurgical Chemistry of Iron; Cast or Pig Iron; The Production of Pig Iron; The Blast Furnace; Hot-Blast Stoves, Hoists, Lifts, &c.; Fuel, Blast, Charges, Yield and Waste Gases of the Blast Furnace; Castings in Iron, Foundry Appliances, &c.; Malleable or Wrought Iron; The Production of Malleable Iron Direct from the Ore; Indirect Methods for the Production of Malleable Iron; The Production of Malleable Iron; The Production of Malleable Iron; The Production of Malleable Iron in Open-Hearth Furnaces; Refining of Pig Iron; The Production of Malleable Iron in Open-Hearth Furnaces; Refining of Pig Iron; Pudddling; Machanical Puddling and Rotary Puddling Furnaces; Forge and Mill Machinery, Furnaces, Plant, and Operations; Steel and Ingot Iron; The Methods Employed in the Production of Steel Direct from the Iron Ore and by the Carburization of Malleable or Bar Iron, by the Decarburization of Pig Iron in the Finery or in the Puddling Furnace, by the Fusion of Pig Iron with Malleable Iron or with Iron Ores in the Open-Hearth Steel-Melting Furnace; The Bessemer or Pneumatic Process for the Production of Steel from Pig Iron; The Basic Process for the Conversion of Phosphoric Pig Iron into Steel, in the Bessemer Converter; The Production of Homogeneous Steel Ingots, Fluid Compression of Steel, Compound Armor Plates, &c.

Overman .- The Molder's and Founder's Pocket Guide, By J. Overman, M. E.; new edition, with supplement on statuary and ornamental molding, ordnance, malleable iron castings, &c., by A. A. Fesquet; 44 illustrations, 342 pages, 12mo, cloth, 1880 \$2

The construction of molds for all kinds of metals and materials, and the processes of molding machinery, hollow-ware, bells, statues and articles used for ornamentation and in the industrial arts are thoroughly ex-plained and illustrated. There are also prac-tical details of the construction of melting With an absence of technicalities, the anmore distinguishes the properties of the useful
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uch a practical manner that the chemical
rinciples involved may be clearly under-

This treatise presents a practical view of the various operations of metallurgy, with details of working, ventilating and draining mines; assaying and testing minerals; descriptions of furnaces, forge hammers, rolling mills. The preparation of ores and the classification of metals are considered in detail

Overman.—The Manufacture of Steel. By F. Overman, M. E.; new, enlarged and revised edi-tion, by A. A. Fesquet; 285 pages, 12mo, cloth; 1873 \$1.50 Blacksmiths and manufacturers of articles

of hardware will find in this book a concise account of the nature and varieties of steel, and the practice and principles of working and making steel after the approved German and English methods.

West.—American Foundry Practice. By Thomas D. West; illustrated, 391 pages, 8vo, cloth; 1882...\$2.50

A practical treatise on the management of cupolas and the melting of iron. The author, a practical foundryman, treats of the molder and his trade, green-sand molding; loam and dry-sand molding, and the manipulation of iron castings. The work is a valuable addition to the list of books upon this subject.

HYDRAULICS.

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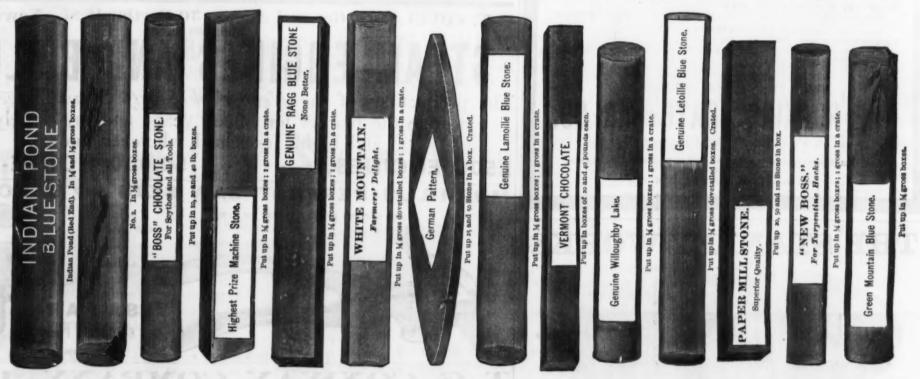
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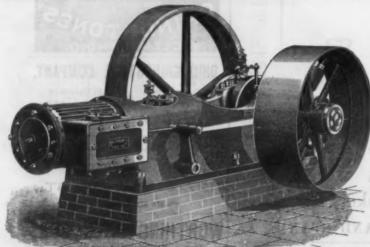
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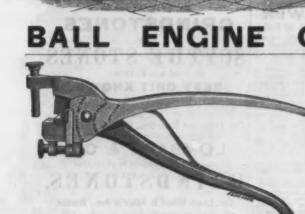


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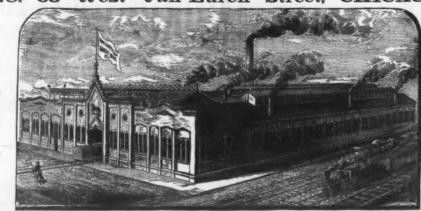


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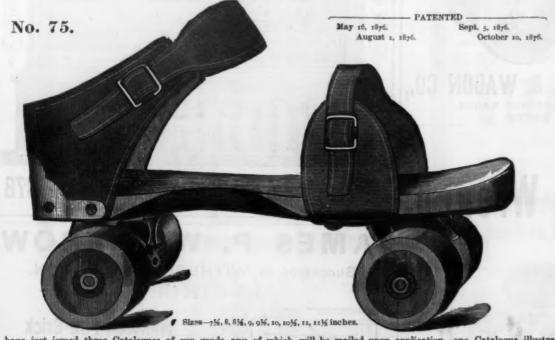
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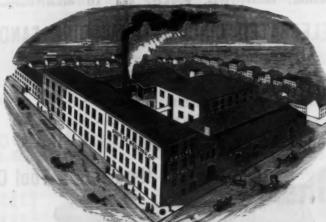
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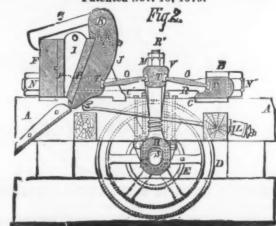
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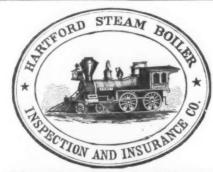
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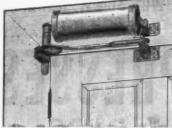
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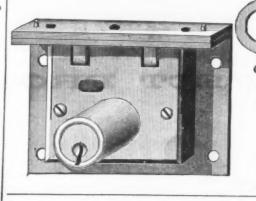
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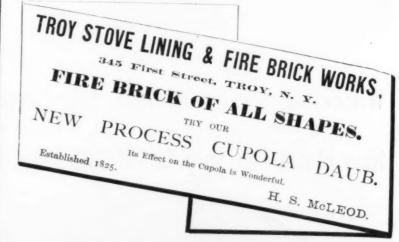


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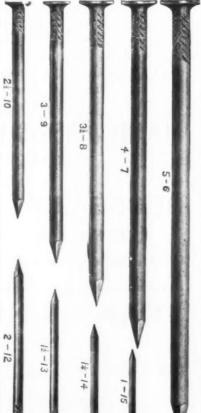
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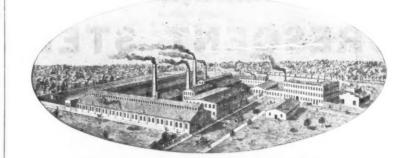


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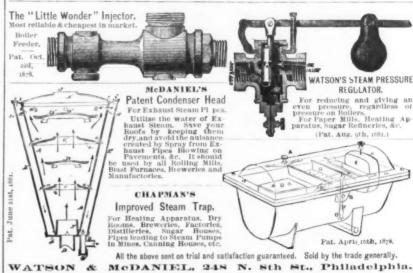
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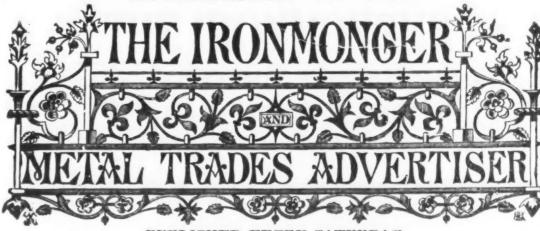
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With which is incorporated The Universal Engineer,

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AUGUST 16. SEPPEMBER 13, OCTOBER 11, NOVEMBER 8, DECEMBER 6; 1884, JANUARY 3 and 31, FEBRUARY 28. MARCH 28, APRIL 25.

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so far as our experience of more than twenty years is concerned, will be covered by The Fourion Supplement at least twice a year. Thus a Price List of Advertisement inserted in the Ironmonger and Fourion Supplement is a strikingly powerful and most efficient way of publicity, not to be compared with any of the other ordinary channels of communication.



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The Best in the World. SO CLAIMED BY ALL USING THEM. Being made of the very best malleable iron, cannot be broken

are heavily ribbed where needed; cannot be bent; easily put up; no cutting or grinding on small journal-pin, and can never, from use or wear, be forced from the track. Always working free and easy; no chocking or binding. The force applied to the door is always transferred to a roller. No joints to pound and jump over. A continuous track (merchant bar, 3-16 or ½ x 1½) is a cheap and desirable feature. Special inducements to the trade. Correspondence solicited.

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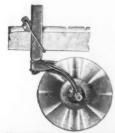
PURE IRON ORE PAINTS, Red (Rossie), Purple and Brown. We guarantee all our paints, and respectfully solicit the patronage of consumers and dealers. Our paints are used largely by the railroads and car builders of our country. Send for Price List No. 15. OFFICE: 154 MERWIN ST., CLEVELAND, O.

IRON PAINT. Manufact'd by HUBBELL, TAYLOR & CO., Northville, N. Y



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FOR WOOD OR STEEL BEAM PLOWS.

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FOR WATCH, CLOCK AND OTHER SPRINGS,

Band Steel for Saws for Metal and Wood. Steel for all Mechanical Uses. The "Lion" Brand of Band Saws Best and Cheapest Made. Correspondence Solicited.

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Superior Corrugated Roofing, Siding, Cell-ing, Arches, Lath, Etc. For Rolling Mills, Blast Furnaces, Foundries, Machine Shops, Car Shops, Boiler and Engine Hooms, Etc.

Fire, Water and Wind Proof. Light, Cheap and Durable.

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PATENTED ATTACHMENTS.

The most RELIABLE and CHEAPEST article in the market for suspending WINDOW SASHES. Has Great Tensile Strength, can be easily applied to any window, and gives SATISFACTION wherever used, Liberal Discount to the Trade. Now in use in all the leading cities throughout the United States. Have just furnished Chains to the following buildings: Mutual Life Insurance Co. Hoffman House. cities throughout the United States. Have just furnish following buildings: Mutual Life Insurance Co., Williamsburg Fire Insurance Co. and the Navaro Flats.

Samples Sent to Any Hardware House Free on Application.

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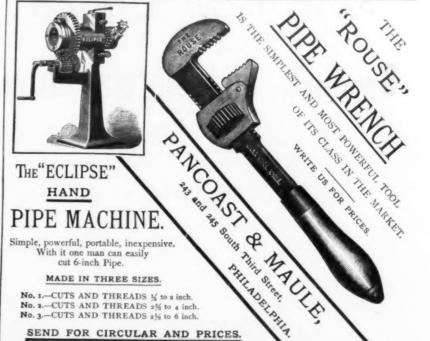
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| PHILADELPHIA.  Lloyd & Supplee Hardware Co.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Flat Head Iron.         dis 75 %           Flat Head Brass         dis 75 %           Round Head Brass         dis 65 %           Round Head Iron.         dis 70 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | See Pittsbur<br>Best (                                                                                                                                 |
| erms, 30 days. For 60 or 90 days, interest added at                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Round Head Iron.   dis 70 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | % to 2 inches                                                                                                                                          |
| nvils. Peter Wright's, ₩ b                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Britannia, Parker's. dis 60% 10 Britannia, Parker's. dis 60% 10 Tinnet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 34 and 35 to 4<br>7-32 and 456 to<br>3-16 and 556 to<br>5-32 inch                                                                                      |
| Trenton Eagle Anvils, American, 10¢. dls. 20%  pple Parers.  \$5.50 net                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Springs. Torrey   dis 50 %   Gem No. 3 small Japanned   \$2.00   dis 50 %   Gem No. 2 medium Japanned   2.75   dis 50&10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | on Well Steel                                                                                                                                          |
| Nvils   Sper cent. per annum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Coil No. 10 # gross net.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Ordinary Size                                                                                                                                          |
| Xe84<br>Hunt's Kentucky and Yankee, ₹ doz. net\$7.25<br>Ribert Mann, ₹ doz. net                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Standard Spring Hinger —   Single No. 0, ₱ doz. net   \$1.25   Single No. 1, ₱ doz. net   1.50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Round<br>5-16 and 2½ to<br>¼ and 3½ to 6<br>7-32 inch                                                                                                  |
| Richland Chief   7.25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Other Standard Spring Hinges dis 25&10 %  Stocks and Dies dis 10 and 5 %  Stove Polish.—Gem # gross, \$4.50, dis 5 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3-16 Square, Flat                                                                                                                                      |
| Bates' Nut Augers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Fire Fly \$3.00 gross, net Tacks: dis 30&10 % Shoe Nails—4.8, and over 8¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Cut to specific                                                                                                                                        |
| Bates' Nut Augers.   dis.69&10 \$\frac{1}{2}\$ (Cook's Augers.   dis.40&10&10 \$\frac{1}{2}\$ (Various Fib) Augers.   dis.40&10&10 \$\frac{1}{2}\$ (Watrous's Ship Augers.   dis.15 \$\frac{1}{2}\$ (Benjamin Pierce Auger Bits.   dis.40 \$\frac{1}{2}\$ (Watrous's Gook 10 \$\frac{1}{2}\$ (Watrous's Gook 10 \$\frac{1}{2}\$ (Watrous's Gook 10 \$\frac{1}{2}\$) (Wat | Spoons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Open Hearth                                                                                                                                            |
| Snell's Augers and Bits.         dis 90 %           Snell's Ship Augers         dis 15 %           Cook's Auger Bits         dis 40%10%10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Traps.   dis 35   denuine Oneida—Newhouse     dis 35   denuine Oneida—Newhouse list.   First qual.   dis 608.10   vises.   Solid Box.   Trenton new list.   dis 45   65 0   wrenches.   Agricultural.   dis 708.10   dis 608.3   dis     | To 21 gauge<br>1¢ extra for<br>Cut to multi                                                                                                            |
| Snell's Augers and Bits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Coes' Mechanics'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Auger and Au                                                                                                                                           |
| Light and Commondis. 40 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Wire.  Bright or Annealed, No. 0 to 18.  Bright or Annealed, No. 19 to 28.  Glis 62½ 66 67½ 67 Bright or Annealed, No. 27 to 36.  Glis 70 67 06210 7 Coppered, 0 to 18.  Tinned Broom Wire.  Galvanlaed Barb Wire.  Galvanlaed Barb Wire.  Galvanlaed, No. 7 to 18.  Market List, dis 47½ 65 50 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Axle Steel for<br>Frog Points a<br>Frog Side Bar                                                                                                       |
| Bevin Bros. Mfg. Co. Light Hand Bells dis. 70&10 %<br>Swiss Pattern Hand Bells 60 %<br>Connell's Door Bells dis. 15&10 %<br>Gt. Western & Kentucky Cow, new list dis. 60 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Bright or Annealed, No. 27 to 36 dis 70 @ 70&10 2 Coppered, 0 to 18 dis 524 @ 575 5 Tinned Broom Wire dis 576 @ 60 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Pick, plain (he<br>Pick and Matt<br>Skate Steel<br>Table Cutlery                                                                                       |
| Boring Machines.<br>Upright, without AugersList, \$5.50 dis. 45@50 %<br>Angular, without AugersList, 6.75                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Galvanized Barb Wire                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                        |
| Bolts.—Eastern Carriage Bolts, new list, June 10,<br>1884.—dis. 75 @ 75 % 5<br>Philadelphia Carriage Bolts.—new list, dis. 70 & 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Wringers,   \$0.00     \$0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Roller<br>Spindle, subje<br>Trap Spring S<br>Forged Crank                                                                                              |
| Stanley, Wrought Shutter   GIS, 306210   Stanley, Wrought Shutter   GIS, 40625   Braces, —Barber's.   GIS, 5065   Backus.   GIS, 5065                                                                                                                        | Universal No. 2 33.00 dozen lots<br>Novelty No. 2, for common tubs 30.00 83.00 per<br>Novelty No. 3, for common tubs 30.00 ber 30.00 per Novelty No. 3, 561 dozen.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Piston Rods,<br>Piston Rods,                                                                                                                           |
| American Ball. dls. 55 % American Ball. dls. 55 % lstfts.—Cast Fast Joint, Narrow dis. 40&10&10 % Cast Fast Joint Broad, dis. 40&10&10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Excelsior E, for stationary tubs 39.00<br>Excelsior F 43.50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Slide Bars, pla<br>Slide Bars, for<br>Boiler, Fire-B                                                                                                   |
| Cast Loose Joint, Narrow.         dis. 60&10 %           Cast Loose Joint, Broad.         dis. 60&10 %           Cast Acorn, Loose Pin.         dis. 60&10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | PITTSBURGH.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Boiler, Fire-B<br>thick<br>Boiler, Fire-I<br>thick                                                                                                     |
| Gt. Western & Kentucky Cow, new llstdls. 60 % jorring Machines                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Merchant Iron. TERMS.—Note or acceptance at 60 days, with current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Circulars and<br>rately<br>Smoke Stack,<br>Locomotive T                                                                                                |
| Wrought Table Hinges and Back Flapsdis. 55&10 @ Wrought Narrow Fastdis. 55&20 @ 55&10&10 % Wrought Loose Jointdis. 60&2\\ @ 60&2\\ @ 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60&2\\ & 60                                                                                                                               | mvoice.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Square, Roun                                                                                                                                           |
| olina Dutta.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | For fluctuations and discounts on card<br>rates see weekly Pittsburgh Trade Report.<br>The following are card rates.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | inch and ov<br>Mill Saw, 8-in<br>Taper, 316-ine<br>Horse and She                                                                                       |
| Shepard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | The following are card rates, Flat Bar.  134 to 4 by 34 to 1 inch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Spiral, Taper,                                                                                                                                         |
| nsters.—Bed (new list July 1, 1880) dis 50@55 %<br>Plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 134 to 6 by 134 to 134 " 2.96 134 and 134 by 34 to 34 " 2.66 1 and 134 by 34 to 34 " 2.76                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1x3-16, 36x3-16<br>1 and 13-16x3-                                                                                                                      |
| Galvanized Pump                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 78. 74 and 78 by 78 to 78 inch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | % and %x1/4 a<br>Solid Safe Cas<br>Three and Fiv                                                                                                       |
| 3-16 34 5-16 34 7-16 35 gold.  3-16 34 5-16 34 7-16 35 in.  binels.—Socket Framing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 234 to 334                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Fork and Rak<br>Horse Rake S<br>Hoe, Crucible                                                                                                          |
| Hunters   Bed (new list July 1, 1880                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | % to 34. 2.6¢ 3.16. 5.5¢  Oval Iron, 5.5¢  2 to 1½ 2.9¢ ½ 3.3¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Corn Stalk Cu<br>Beveled Hoe<br>Crucible Ploy                                                                                                          |
| Enterprise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | % to 14 inch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Spring                                                                                                                                                 |
| Landers, Frary & Clark, J. Russell & Co., Lamson &<br>Goodnow Mfg. Co. and Meriden Cutlery Co., Manu-<br>facturers' prices net.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Tate s see weekly Pitts burgh Trade Report. The following are card rates.   Flat Bar.   1\( \frac{1}{2} \) to 4 by \( \frac{3}{2} \) to 1 \( \frac{1}{16} \) to 6 by \( \frac{3}{2} \) to 1 \( \frac{1}{16} \) \( \frac{1}{2} \) \ | Spring spiral<br>Tire, 2-16 thic<br>Toe Calk.<br>Plow.<br>Axie Billets.                                                                                |
| Hart Mir Co's                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 34 inch, Nos. 13 and 14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Sleigh Shoe<br>Cutter Shoe, o                                                                                                                          |
| Tfnned                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | \$\\ \begin{array}{cccccccccccccccccccccccccccccccccccc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Sleigh Shoe.<br>Cutter Shoe.<br>Scythe Back S<br>Grain Drill By<br>Grain Drill Pc<br>Rolling Coult<br>Thrasher Stee                                    |
| Burnished                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ### Herry Bands.   3\( \) to 6   by \( \) 4 and 5-16 lnch.   2.7\( \) 1\( \) 1 to 3\( \) 4 and 5-16 "   2.7\( \)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Thrasher Stee<br>Thrasher Tee<br>Rolled Hamm                                                                                                           |
| Nicholson       dis 50&10 %         Disston       dis 50&10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1 to 136 by 34 and 5-16 2.86 4 to 36 by 34 and 5-16 3.06 56 and 36 by 34 and 5-16 3.56                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Terms,—For                                                                                                                                             |
| Butcher.  Iuting Machines.  Eagle-34 in. roll.  Pagle-31 in roll.  Cach 82.15 dis 35 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1½ to 6 by ½ to 3-16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Furnace Floor<br>Housings and<br>Guide Plates.<br>Spindles and                                                                                         |
| Crown—4½ in. roll                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 to 1% by Nos. 11 and 12 3.2¢ 34 and 13-16 by 16 to 3-16 34¢ 34 and 13-16 by Nos. 11 and 12 3.4¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Spindles and<br>Sand Rolls an<br>Sand Rolls an<br>Pine Mill Cast                                                                                       |
| Adjustable Handle dis 20 % Ty Pans. dis 50 % Ty                                                                                                                    | \$\frac{4}{4}\$ and \$11.16\$ by \$\frac{1}{4}\$ to \$3.16. \$3.7\epsilon\$ \$\frac{3}{4}\$ and \$11.16\$ by \$\frac{1}{4}\$ to \$3.16. \$3.7\epsilon\$ \$\frac{3}{4}\$ and \$1.16\$ by \$\frac{1}{4}\$ to \$3.16. \$3.8\epsilon\$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Pipe Mill Cast<br>Rolling Mill C<br>Spur and Beve<br>Spur and Beve                                                                                     |
| Maydole Hammers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | \$\begin{array}{c} \text{and 9-16 by Nos. 11 and 12.} & 4.0¢ \\ \frac{1}{3} inch by \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Spur and Bevo<br>Pulleys up to<br>Pulleys over 3<br>Engine Castin<br>Engine Castin                                                                     |
| Disston Loop Handles Cross-Cut33¢ pair net<br>Boynton Loop Handles Cross-Cut33¢ pair net                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Hoop Iron. 3.3¢ 14 to 4, Nos. 13, 14 and 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Engine Castin                                                                                                                                          |
| Yerkes & Plumb, new listdis 85 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 154 to 2, No. 19 3.5¢ 154 to 2, No. 20 8.6¢ 154 to 2, No. 21 3.7¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 6 to in. dia<br>8 to 15 in. di<br>25 to 24 in. di<br>14 to 31 in. di<br>After Octob                                                                    |
| Strap and T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 15-16, 1, and 1½, Nos. 13, 14 and 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | After Octob<br>settlement, a                                                                                                                           |
| Vulcan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 15-16, 1, and 1¼, No. 21. 3.8¢<br>15-16, 1, and 1¼, No. 22. 3.9¢<br>26, Nos. 13, 14 and 15. 3.7¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Strictly Pure<br>Tin Palls, 16                                                                                                                         |
| Hunts.    inges.   dis 60, 10, 10&2 @ 70 s   Strap and T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 74, Nos. 16, 17 and 18. 3.8¢<br>34, Nos. 19 and 20. 3.9¢<br>34, No. 21. 4.0¢<br>24 No. 29. 4.0¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | b over keg<br>Dry White Le<br>Red Lead, ver<br>Litharge (Pot<br>Freights eq<br>Lead is made.                                                           |
| Saranac                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1 to 13% by \( \frac{1}{3} \) and 5-16 \\  2.8e \\ \frac{1}{3} \) aby \( \frac{1}{3} \) and 5-16 \\  3.0e \\ \frac{1}{3} \) and \( \frac{1}{3} \) by \( \frac{1}{3} \) and 5-16 \\  3.5e \\ \frac{1}{3} \) and \( \frac{1}{3} \) by \( \frac{1}{3} \) and \( \frac{1}{3} \) by \( \frac{1}{3} \) co 3-16 \\  3.0e \\ \frac{1}{18} \) by \( \frac{1}{3} \) co 3-16 \\  3.1e \\ \frac{1}{1} \) to 136 \\  by \\ \frac{1}{3} \) co 3-16 \\  3.1e \\ \frac{1}{3} \\ \frac{1}{3} \) and \( \frac{1}{3} \) 6 by \\ \frac{1}{3} \) to 3-16 \\ \frac{1}{3} \\ \frac{1}{3} \) and \( \frac{1}{3} \) 1.6 by \\ \frac{1}{3} \) to 3-16 \\ \frac{1}{3} \\ \frac{1}{3} \) and \( \frac{1}{3} \) 1.6 by \\ \frac{1}{3} \) co 3-16 \\  3.7e \\ \frac{1}{3} \\ \frac{1}{3} \) and \( \frac{1}{1} \) 6 by \\ \frac{1}{3} \) by \( \frac{1}{3} \) 1.6 \\ \frac{1}{3} \\ \frac{1}{3} \) and \( \frac{1}{1} \) 1.6 by \\ \frac{1}{3} \) co 3-16 \\  4.0e \\ \frac{1}{3} \\ \text{ and } 11.6 \\ \text{ by Nos. 11 and 12} \\ \frac{3}{3} \\ \frac{1}{3} \\ \text{ and } 11.6 \\ \text{ by Nos. 13 and 12} \\ \frac{1}{3} \\ \frac{1}{3} \\ \text{ and } 11.6 \\ \text{ by Nos. 13 and 12} \\ \frac{1}{3} \\ \frac{1}{3} \\ \text{ and } 11.6 \\ \text{ by Nos. 13 and 12} \\ \frac{1}{3} \\ \frac{1}{3} \\ \text{ to 2} \\ \text{ Nos. 16, 17 and 18} \\ \frac{3}{3} \\ \frac{1}{3} \\ \text{ to 2} \\ \text{ Nos. 16, 17 and 18} \\ \frac{3}{3} \\ \frac{1}{3} \\ \text{ to 2} \\ \text{ No. 20} \\ \frac{3}{3} \\ \frac{1}{3} \\ \text{ to 2} \\ \text{ No. 20} \\ \frac{3}{3} \\ \frac{1}{3} \\ \text{ to 2} \\ \text{ No. 21} \\ \frac{3}{3} \\ \frac{1}{3} \\ \text{ to 2} \\ \text{ No. 21} \\ \frac{3}{3} \\ \frac{1}{3} \\ \text{ to 2} \\ \text{ No. 21} \\ \frac{3}{3} \\ \frac{1}{3} \\ \text{ to 2} \\ \text{ No. 18} \\ \frac{1}{3} \\ \text{ to 2} \\ \text{ 10} \\ \frac{1}{3} \\ \text{ 10} \\ \frac{1} \\ \frac{1}{                                                                                         | Freights eq<br>Lead is made.                                                                                                                           |
| Wadsworth ♥ doz., net 10.50<br>Walton Straw Knives                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 13-16, No. 21. 4.1¢<br>13-16, No. 22. 4.2¢<br>34, Nos. 13, 14 and 15. 4.9¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Terms: Not<br>from date of<br>allowed, but                                                                                                             |
| Branford                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 94, Nos. 16, 17 and 18. 4.1¢ 34, Nos. 19 and 20. 4.2¢ 34, No. 21. 4.3¢ 34, No. 21. 4.3¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Discount, 60&                                                                                                                                          |
| American Fadiocks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 11-16, Nos. 13, 14 and 15. 4.2¢<br>11-16, Nos. 16, 17 and 18. 4.2¢<br>11-16, Nos. 19 and 20. 4.3¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                        |
| ₩ dor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 11-16, No. 21 4.5¢<br>11-16, No. 22 4.5¢<br>26, Nos. 13, 14 and 15 4.6¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | United                                                                                                                                                 |
| Buckeyelarge list, net; small list, net<br>TubularNo. 0, \$7.50; No. 1, \$9.00 \$\psi\$ doz. net<br>Guards, 40\epsilon extra.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 36, Nos. 16, 17 and 18.     4.4¢       36, Nos. 19 and 20.     4.6¢       56, No. 21.     4.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 25 6 x 8 to                                                                                                                                            |
| No.   O4   O5   O6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | %, No. 22. 4.8¢<br>%, No. 23. 4.9¢<br>9-16, Nos. 13, 14 and 15. 4.6¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 39 11 x 14 to<br>48 16 x 24 to<br>54 15 x 34 to                                                                                                        |
| awn and Garden Pumps.<br>Holland Patentlist, \$5.00, dis 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 9-16, Nos. 16, 17 and 18. 4.7¢<br>9-16, Nos. 19 and 20. 4.8¢<br>9-16, No. 21. 4.9¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 60 26 x 28 to<br>70 26 x 36 to<br>80 26 x 46 to                                                                                                        |
| Long and Short Cutternew list, 50&10 %<br>Pennavivania Patterndis 50&10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 9-16, No. 23. 5.0¢<br>9-16, No. 23. 5.1¢<br>1/4 inch, Nos. 13, 14 and 15. 4.8¢<br>1/4 inch, Nos. 16, 17 and 18.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 84 30 x 52 to<br>90 30 x 56 to<br>94 34 x 58 to<br>100 36 x 60 to                                                                                      |
| Enterprise Mfg. Co.'s Measuring Faucets.dis. 20&10 % Stebblas' Gates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 14 inch, Nos. 19 and 20 5.1¢<br>14 inch, No. 21 5.2¢<br>15 inch, No. 22 5.2¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 25 6 x 8 to<br>39 11 x 14 to                                                                                                                           |
| olasses (iates. Enterprise Mfg. Co.'s Measuring Faucets.dis. 20&10 g distebbins' Gates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 134 inch, No. 23                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 25 6 x 8 to<br>39 11 x 14 to<br>48 16 x 24 to<br>54 15 x 34 to<br>60 26 x 28 to                                                                        |
| eat Cutters. dis. 40 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1.10¢ ₩ n extra will be charged for each gauge<br>lighter than the lightest indicated.<br>1.10¢ ₩ n extra will be charged for cutting Hoops to<br>specified lengths.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 70 26 x 36 to<br>80 26 x 46 to<br>84 30 x 52 to                                                                                                        |
| Continue                                                                                                                      | 1.10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 90 30 x 56 to<br>94 35 x 58 to<br>100 86 x 60 to                                                                                                       |
| Stuffers dis. 40 g Enterprise Stuffers dis. 25 g anes.—Sandusky Tool Co. dis. 20 g                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 8 m and less than 9 m, v set of 6 hoops                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Sizes above                                                                                                                                            |
| Ogonts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | All Iron, including Tire                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | glass more the inches in leng inches, will                                                                                                             |
| ane Irons.—Ohio Tool Co                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Plow Slabs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | bracket.                                                                                                                                               |
| Stanley's Adjustable   Gis. 05x10's<br>  Stanley's Non-Adjustable   Gis. 65x10 's<br>  Icks.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Axes, Single I                                                                                                                                         |
| azor Streps.  amont Combination F doz. \$1.00  amont Combination 1 gross lots \$42.00  mitation Emerson F doz. \$2.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Common.   Charcoal Juniata.   S.5¢   S.0¢   6.5¢   Nos. 15 to 17   S.8¢   S.3¢   6.8¢   Nos. 18 to 21   4.1¢   5.6¢   7.1¢   Nos. 22 to 24   4.3¢   S.8¢   7.3¢   Nos. 25 and 26   4.5¢   6.9¢   7.5¢   Nos. 25 and 26   4.5¢   6.9¢   7.5¢   Nos. 27   4.7¢   6.2¢   7.7¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢   7.5¢    | Axes, Single I<br>Axes, Single I<br>Axes, Double<br>Axes, Double<br>Drain Tools, II<br>Hoes, Planter<br>Hoes, Scovill<br>Hoes, Handle<br>Handles, Croe |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | All sheets No. 18 and lighter, over 30 inches wide,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Hoes, Scovill<br>Hoes, Handles<br>Handles, Cross                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | not less than 2.10¢ extra.  Wood's Patent Plantahed Sheet,  1st quality (A)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Handles, Cros<br>Handles, Shov<br>Saws, Circular<br>Saws, Long<br>Saws, Cross-C                                                                        |
| Lbs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Savra Cross C:                                                                                                                                         |
| HB POG.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Coal Screen From.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Shovels, list<br>Spades, list<br>Scoops, list                                                                                                          |
| ticel and Iron.dis. 50 ; full casedis. 50&10&2 for cash<br>fry Squares, Stanley                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1% 05 % Dy 5-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | secops, list                                                                                                                                           |
| ythes.—Golden Clipper. Damascus Blade, Roxed and Sharpened                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 134 by % by 5-16 3.0¢ 1 by % by 5-16 3.5¢ 234, 3, 334 and 4 Inch 3.3¢ 134 inch 3.3¢ 134 inch 3.4¢ 1 3.5¢ 134 inch 3.5¢ 134 by 1 Inch, for Flow Handles 3.5¢ 135 by 1 Inch, for Plow Handles 3.5¢ 136 by 36                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Entirely n                                                                                                                                             |
| Sharpened                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 114 by 44 " " 3.8¢<br>114 by 44 " " 3.8¢<br>T Rail. 3.9¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | one plate of cast-iron sin                                                                                                                             |
| Ws.—Disston's Hand, Panel and Ripdia 20&10 s           plaston's Circular         dia 45&10 s           Cross-Cut No. 2, Plain Tooth.         dia 45&10 s           Cross-Cut Patent Tooth.         dia 45&10 s           Cross-Cut Champion Tooth.         dia 45&10 s           dia 45&10 s         dia 45&10 s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 8 lbs. to the yard2.9¢   20 lbs. to the yard2.8¢   12  2.8¢   28  2.8¢   16  2.8¢   30  2.8¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | being lighte                                                                                                                                           |
| Cross-Cut Patent Tooth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | spile Joints for 12, 16 and 20 b. Rail, 40¢ each; 28 and 30 b. Rail, 50¢ each; 40 b., 60¢ each. 3½ by ¾ and ½ Spikes for 20 and 28 b. Rail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | These si                                                                                                                                               |
| Ovels and F pades.   dis 17% \$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2½ by 5-16 " " 8-7. Rail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | wrought stee<br>heat, cold, o                                                                                                                          |
| d Irons,—4 to 10 b                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1½ by ¾ and 7-16 inch. 8.2¢<br>1¼ by ¾, 7-16 and ¾ inch. 8.5¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | We furni<br>or galvanize                                                                                                                               |
| OBC.     W B 2346       Washita Extra.     W B 166       Washita No. 1.     W B 166       Washita No. 2.     W B 136       Washita Sips.     W B 366       Washita Axe.     W B 136 net       Indostan Oil Stone No. 1.     W B 66       Indostan Axe Stone     W B 67       Indostan Sips.     W B 106                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Norway Nail Rods. 8.0¢<br>Guard Iron, %x84x% and %x%x84. 4.0¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -freedom                                                                                                                                               |
| Vashita Slips P 36¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Drag Bars. 3.8¢ Dropper Bars. 3.8¢ Cylinder and Landelde Iron. 5.8¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | from cast ire                                                                                                                                          |
| industan Ave Stone # % 86 dis 40 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Plow Ream from                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | THE                                                                                                                                                    |

Mrs. Fouse.
Stone.
Washita Extra.
Washita No. 1
Washita No. 1
Washita No. 2
Washita Slips
Washita Slips
Washita Axe.
Hindostan Oil Stone No. L.
Hindostan Axe Stone.

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|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 1                | Screws. Flat Head Iron. dis 75 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |
|                  | Flat Head Iron.   dis 75 %   Flat Head Brass   dis 75 %   Round Head Brass   dis 65 %   Round Head Iron.   dis 70 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 6           |
|                  | Round Head Iron.   dls 70   Speous                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Co 0.770 M  |
|                  | Britannia, Parker's   dis 60&10 %   Tinned   dis 10 %   Springs.—Torrey   dis 50 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 5540        |
|                  | Gem No. 2 medium Japanned   2.75   dis 50&10 %   Gem No. 10 \( \pi \) gross net   \( \pi \) to Standard Springs   \( \dis 50&10 \) %   6.00   \( \text{dis 50&10 } \) %   \( \text{dis 50~10 } \) %                                                           |             |
|                  | Warner Door Springs, \$\phi\$ dos. \$\pm2.50\$, dis 10 \$\pm \text{SNother Notes of Prings.} \$\pm\$ dos. \$\pm2.50\$, dis 10 \$\pm \text{SIngle No. 0}\$, \$\pm\$ doz. net 1.50 Other Standard Spring Hinges dis 10 \$\pm3.60\$ dis 25\$\pm2.10\$ Stocks and Dies dis 10 and 5 \$\pm3.60\$ not standard Spring Hinges dis 30\$\pm0.60\$ dis 10\$ \$\pm3.60\$ not standard Spring Hinges dis 30\$\pm0.60\$ dis 10\$ \$\pm3.60\$ not standard Spring Hinges dis 30\$\pm3.60\$ dis 10\$ \$\pm3.60\$ not standard Spring Hinges dis 30\$\pm3.60\$ dis 10\$ \$\pm3.60\$ not standard Spring Hinges dis 30\$\pm3.60\$ dis 10\$ \$\pm3.60\$ not standard Spring Hinges dis 30\$\pm3.60\$ dis 10\$ \$\pm3.60\$ not standard Spring Hinges dis 30\$\pm3.60\$ dis 10\$ \$\pm3.60\$ not standard Spring Hinges dis 30\$\pm3.60\$ dis 10\$ \$\pm3.60\$ not standard Spring Hinges dis 30\$\pm3.60\$ dis 10\$ \$\pm3.60\$ not standard Spring Hinges dis 30\$\pm3.60\$ dis 10\$ \$\pm3.60\$ not standard Spring Hinges dis 10\$ \$\pm3.60\$ not standard Spring Hinges dis 30\$\pm3.60\$ not standard Spring Hinges dis 10\$ \$\pm3.60\$ no                                                                            | 150 85      |
|                  | Other Standard Spring Hinges dis 25&10 g<br>Stocks and Dies ds 10 and 5 g<br>Hove Polish.—Gem. p gross, 4.50, dis 5 g                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 10000       |
|                  | Dixon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0           |
|                  | Shoe Nalls—314-81 and under, 9¢ 10 % Double Pointed Tacks. dis 70&10 %  Traps.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | (           |
| 10.00            | Traps.   dis 35   Genuine Onelda—Newhouse   dis 35   Im. Onelda—Newhouse   list.   First qual.   dis 608.10   2   Vises.   Solid Box.   Trenton new list.   dis 46   65   0   Vrenches.   Agricultural   dis 708.10   0   0   0   0   0   0   0   0   0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1           |
| 20000            | Coes Genuine   dis 60&3 %   Coes Mechanics   dis 60&3 %   dis 60&10&3 %   Coes Mechanics   dis 60                                                          |             |
|                  | Wire,  Bright or Annealed, No. 0 to 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1           |
| 2000             | Coppered, 0 to 18. dis 52% @ 57% 5 Tinned Broom Wire. dis 57% @ 60 7 Galvanized Barb Wire 75%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2 2 2 5 mm  |
| -                | Painted Barb Wire. 6346<br>Gaivanized. No. 7 to 18Market List, dis 4736 @ 50 %<br>Wringers.<br>Peerless No. 234                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1           |
|                  | (a) vanized. No. 7 to 18. Market List, dis 47% 6 50 % Wringers. 256 \$0.00 Peerless No. 256 \$0.00 Peerless No. 256 \$0.00 Universal No. 256 \$35.00 Universal No. 256 \$35.00 Value of Novelty No. 2, for common tubs. \$30.00 \$83.00 per Novelty No. 2, for common tubs. \$30.00 \$83.00 per Novelty No. 2, for common tubs. \$30.00 \$83.00 per Novelty No. 2, for common tubs. \$30.00 \$83.00 per Novelty No. 2, for common tubs. \$30.00 \$83.00 per Novelty No. 2, for common tubs. \$30.00 \$83.00 per Novelty No. 2, for common tubs. \$30.00 \$83.00 per Novelty No. 25 | 964         |
|                  | Novelty No. 3, for common tubs 30,00 dozen. Novelty No. 3, " 34,50 dozen. Excelsior E, for stationary tubs 39,00 Excelsior F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 00 00       |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1           |
| 0 20 20 20       | PITTSBURGH.  Merchant Iron,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1           |
| S NO NO          | TERMS.—Note or acceptance at 60 days, with current<br>rate of exchange on New York, or a discount of 2 ₹<br>cent. for cash, if remitted within 10 days from date of<br>invoice.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |
| 2000             | For fluctuations and discounts on card<br>rates see weekly Pittsburgh Trade Report.<br>The following are card rates.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |
| 100000           | Flat Bar.   2.56   4 to 6 to 7 to 8 to 1   1 to 134.   2.56   4 to 6 to 7 to 1   1 to 1 to 6 to 7 to 1   1 to 134.   2.56   2 to 9 tile.   2                                                           | -           |
| C The sec of     | 134 to 6 by 1/5 to 1/6 2.96 134 and 1/6 by 3/6 to 3/6 2.96 1 and 1/6 by 3/6 to 3/6 2.96 1 and 1/6 by 3/6 to 3/6 2.96 1 and 1/6 by 3/6 to 3/6 2.96                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |
| i.               | 1 to 174 Rounds and Squares.<br>2 to 284 2.5e 9 to 9.16 2.7e<br>2 to 284 2.7e 24 to 7.16 2.9e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -           |
| - www            | 1         to 174         Rounds and Squares.         2.7e           2         to 294         2.5e         94 to 9-16         2.7e           2         to 294         2.7e         94 to 7-16         2.9e           234         0.34         3.0e         3.         3.         3.3e           304         4         3.5e         5-10         3.3e         3.5e         3.         3.5e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |
| 2000             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1           |
|                  | % to %. Half out and Half Round. 3.7e<br>% to 14 inch. 3.2e   4 inch. 4.0e<br>% to 34 " 3.7e 59 5 5.5e<br>Horse Shoe. 3.5e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2.000       |
| 200              | Wagon Box Iron.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1           |
|                  | 58 4 4 13 and 14 5.55<br>54 4 4 13 and 14 4.0¢<br>54 4 4 11 and 12 3.8¢<br>54 4 5 13 and 14 3.8¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0000        |
|                  | 314 to 6 by 14 and 5-18 linch. 2.7¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1           |
| 20.00            | \$4 to 36 by 34 and 5-16 " 3.0c<br>56 and 36 by 34 and 5-16 " 3.5c                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1           |
| 6                | 1½ to 6     by ½ to 3-16.     3.0e       1½ to 6     by Nos. 11 and 12     3.1e       1 to 1½ by ½ to 3-16.     3.1e       1 to 1½ by ½ to 3-16.     3.1e       2 and 13-16 by ½ to 3-16.     3.2e       3 and 13-16 by ½ to 3-16.     3.4e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1           |
|                  | 1 to 195 by Nos. 11 and 12. 3.26<br>36 and 13-16 by 16 to 3-16. 3.46<br>36 and 13-16 by Nos. 11 and 12. 3.56                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 100.00      |
| 100              | 1 to 196 by Nos. 11 and 12 3.26  24 and 13-16 by 8 to 3-16. 3.46  34 and 13-16 by Nos. 11 and 12 3.56  34 and 11-16 by Nos. 11 and 12 3.56  34 and 11-16 by Nos. 11 and 12 3.86  34 and 11-16 by Nos. 11 and 12 3.86  34 and 9-16 by Nos. 11 and 12 4.16  35 inch by 14 and 3-16. 4.16  36 inch by Nos. 11 and 12. 4.16  36 inch by Nos. 11 and 12. 4.16  37 inch by 15 and 3-16. 4.36  38 inch by Nos. 11 and 12. 4.16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | A 20 mm     |
|                  | \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1           |
| 1                | 14 to 2, No. 19, 17 and 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |
| 44.              | 14 to 2, No. 21 3.7¢ 15 to 2, No. 22 3.8¢ 15-16, 1, and 156, Nos. 13, 14 and 15. 3.5¢ 15-16, 1, and 156, Nos. 16, 17 and 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1           |
| 20000            | 13 to 2, No. 22 3.6.6 15 16 15 16 16 16 16 16 16 16 16 16 16 16 16 16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |
| 20.000           | 56, Nos. 13, 14 and 15. 3.7¢ 56, Nos. 16, 17 and 18. 3.8¢ 56, Nos. 19 and 20. 3.9¢ 56, Nos. 19 and 20. 3.9¢ 57, No. 21. 4.0¢ 57, No. 22. 4.1¢ 58, No. 22. 4.1¢ 58, Nos. 13, 14 and 15. 4.1¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |
| -                | 13-16, Nos. 16, 17 and 184.0¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1           |
| )                | 13-16, Nos. 19 and 29. 4.1e 13-16, No. 21. 4.2e 13-16, No. 22. 4.2e 13-16, No. 25. 4.3e \$\frac{1}{2}\$, Nos. 13, 14 and 15. 4.0e \$\frac{1}{2}\$, Nos. 16, 17 and 18. 4.1e \$\frac{1}{2}\$, Nos. 19. and 29. 4.2e \$\frac{1}{2}\$, Nos. 22. 4.3e \$\frac{1}{2}\$, Nos. 19 and 29. 4.2e \$\frac{1}{2}\$, Nos. 19. 4.2e \$\frac{1}{2}\$, Nos. 19. 4.2e \$\frac{1}{2}\$, Nos. 19. 4.3e \$\frac{1}{2}\$, Nos. 19. 4.3e \$\frac{1}{2}\$, Nos. 19. 4.3e \$\frac{1}{2}\$, Nos. 19. 4.3e \$\frac{1}{2}\$, Nos. 19. 10. 4.3e \$\frac{1}{2}\$, Nos. 19. 10. 4.3e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1           |
| 20.00            | \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1           |
| -                | 11-16, Nos. 13, 14 and 15. 4.2¢<br>11-16, Nos. 16, 17 and 18. 4.3¢<br>11-16, Nos. 19 and 20. 4.4¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |
|                  | 11-16, No. 21 4.5¢<br>11-16, No. 22 4.6¢<br>56, Nos. 13, 14 and 15 4.4¢<br>84, Nos. 16, 17 and 18 4.5¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |
| -                | 56         Nos. 19 and 20.         4.6¢           56         No. 21.         4.7¢           56         No. 22.         4.8¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1           |
| -                | 11-16, Nos. 16, 17 and 18     4.3e       11-16, No. 19 and 20     4.4e       11-16, No. 21     4.5e       11-16, No. 22     4.5e       11-16, No. 22     4.6e       56, Nos. 13, 14 and 15     4.4e       56, Nos. 16, 17 and 18     4.5e       56, Nos. 19     4.7e       56, Nos. 22     4.7e       56, No. 23     4.6e       56, No. 23     4.6e       56, No. 23     4.6e       56, No. 23     4.6e       9-16, Nos. 10, 17 and 18     4.7e       9-16, Nos. 10 and 20     4.8e       9-16, No. 21     4.9e       9-16, No. 22     5.0e       9-16, No. 32     5.0e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |
| Name of the last | 9-16, No. 21 4.9¢<br>9-16, No. 22 5.0¢<br>9-16, No. 22 5.1¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |
| 2000             | inch, Nos. 13, 14 and 154.8¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |
|                  | \$\\\ \frac{4.9c}{\text{lnch}\ \text{Nos. 10 and 25}\\\ \frac{5.1c}{\text{lnch}\ \text{Nos. 10 and 25}\\\ \frac{5.1c}{\text{lnch}\ \text{No. 21}\\\ \frac{5.2c}{\text{lnch}\ \text{No. 22}\\\ \frac{5.3c}{\text{lnch}\ \text{No. 23}\\\ \frac{5.4c}{\text{lnch}\ \text{No. 23}\\\ \frac{5.4c}{\text{lnch}\ \text{No. 23}\\\ \frac{5.4c}{\text{lnch}\ \text{No. 25}\\\ \frac{5.4c}{\text{lnch}\ \text{lnch}\ \text{No. 25}\\\ \frac{5.4c}{\text{lnch}\ \text{lnch}\ \text{No. 25}\\\ \text{lnch}\ \text{lnch}\\\ \frac{5.4c}{\text{lnch}\ \text{lnch}\ \text{lnch}\ \text{lnch}\\\ \text{lnch}\\\\ \text{lnch}\\\\ \text{lnch}\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\                                                                                                                                                               |             |
| -                | Ties.  1.10∉ ₩ n extra will be charged for each gauge lighter than the lightest indicated.  1.10∉ ₺ n extra will be charged for cutting Hoops to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |
| -                | specified lengths.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1           |
|                  | 9 to 11 B, \$\psi\$ set of 6 hoops                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |
|                  | Extrus for cutting to Length all Proceding Iron, All Iron, including Tire                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | (A) and (A) |
|                  | Common. Charcoal Juniata                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |
| 1                | Nos. 10 to 14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 12          |

| T                        | HE IRON AGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 7 |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 5 %                      | Nails.<br>See Pittsburgh Trade Report.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |
| 5%                       | See Pittsburgh Trade Report.     Best Quality Refined Cust Steel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |
| 0 %                      | Square, Flat, Octagon and Round.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |
| 5 %                      | 1-16 and 2½ to 3 inches. 10½€                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |
| 5%                       | 7-32 and 41/4 to 5 "                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |   |
| D &                      | 3-16 and 51% to 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |
| 0%                       | 250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |
| 0%                       | Machinery Steel. 20e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |   |
| .00                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |   |
| 0%                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |   |
|                          | Round         5¢         31¢¢           5-16 and 2½ to 3 Inches         6¢         4½¢           ½ and 3½ to 6         7¢         5½¢           7-32 Inch         9¢         7½           3-18         11c         0¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |
| .25<br>.50<br>0 g        | 7.32 inch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |
| 5%                       | 3.16 " 11c ne Square, Flat and Octagon, % extra throughout the                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |   |
| 5%                       | list.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |
| net<br>0 %               | Crut to specified lengths, 166 extra.  Hammer Cast Steel.  Crucible Cast Steel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |   |
| 0%                       | Crucible Cast Steel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |
| 0 %                      | Sheet Steel.—Crucible.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |
| 5 %                      | Best, 2d Qual, 3d Qual Open Hourth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |
| 0 %                      | To 21 gauge11¢ 10¢ 8¢ 16¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |
| 0 %                      | Best. 2d Qual. 3d Qual. Open Hearth. 10¢ & Open Hearth. 10¢ & St.  |   |
| 3 %                      | Mixcellaneous Onst Steel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |
| 5%                       | Axle Steel for carriages and wagons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |
| 5 %                      | Frog Points and Plates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |
| 48                       | Pick, plain (hammered)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |
| 200                      | Pick and Mattock, beveled (rolled)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |
| 140                      | Table Cutlery, plain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |   |
| 140<br>140<br>0 %        | Pike and Cant Hook                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |
| 170                      | Mucellaneous Unst Steel   Auger and Atiger Bit.   56                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |   |
|                          | Roller, Subject to Machinery classification. 6e Trap Spring Steam 1. 8e Forged Crank Pins and Lathe Spindles. 71e Forged Crank Pins and Lathe Spindles. 71e Fiston Rods, forged to shapes. 75e Fiston Rods, forged to shapes. 75e Silde Bars, plain. 76e Silde Bars, torged to shapes. 75e Forged Forged F |   |
| ots                      | Forged Crank Pins and Lathe Spindles. 7166                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |
| er                       | Piston Rods, forged to shapes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |
|                          | Slide Bars, plain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |
|                          | Open Hearth or Bessemer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |   |
|                          | thick                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |
|                          | Boiler, Fire-Box and Flue Sheets, not less than 1/2 thick                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |
|                          | thick.  Circulars and semi-circulars, when ordered separately.  Smoke Stack, to shape.  Locomotive Tank Steel.  Square, Round, Haif Round and Flat Hastard, 8-inch and over.  Mill Saw, 8-inch and over.  File Cast Steel.  Spiral, Taper, Square, 166  Spiral, Taper, act to lengths.  1x4 and over.  1x5-16, 3x3-16 and 34.  7ee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |
| ent                      | Smoke Stack, to shape.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |
| N S                      | File Cast Steel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |   |
|                          | Square, Round, Half Round and Flat Hastard, 8-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |   |
| rd.                      | Mill Saw, 8-inch and over                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |
|                          | Horse and Shoe Rasp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |
| .5e                      | Spiral, Taper, cut to lengths 56                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |
| .5e<br>.6e<br>.6e<br>.7e | 1x\\\^1_4\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |   |
| .60                      | 1x3-16, 36x3-16 and 14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |
| 1.90                     | % and %x1/4 and 3-32 and 12 g                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |
|                          | Solid Safe Cast Steel. 6¢                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |
| .7¢                      | Fork and Poke Gural Implement Cast Steel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |
| 1.1€                     | Horse Rake Steel, cut to lengths, Crucible                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |
| .5€                      | Hoe, Crucible                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |
| .3¢                      | Beveled Hoe and Shovel Steel in Bars                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |   |
| .70                      | Bessemer and Open Hearth,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |
| .0¢                      | Spring . Bessener and Open Hearth. Spring spiral and taper, cut to lengths . 4c Tire 2-16 thick and above . 334c Toe Calk . 34c Plow . 38c                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |
| .5€                      | Tire, 2-16 thick and above. 3467 Toe Calk. 3467 Toe Calk. 3467                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |   |
| Se                       | Plow                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |   |
| 70                       | Plow   356   Axle Billets   356   Sleigh Shoe   356   356   Catton Shoe   356   Sleigh Shoe   356   Slei   |   |
| .5¢<br>.0¢<br>.8¢        | Courte the live of the lengths and tapered                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |
| .8¢                      | Grain Drill Bars. 4c Grain Drill Bars. 5c Grain Drill Points. 5c Rhilling Coulter Blanks, cut and punched. 93c Rhrasher Steel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |   |
| .1¢                      | Rolling Coulter Blanks, cut and punched                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |   |
|                          | Thrasher Steel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |   |
| .7¢                      | Rolled Hammer Billets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |
| .7¢<br>.7¢<br>.8¢<br>.0¢ | rolling Courter Blanks, cut and punched.  1956  Thrasher Steel.  1546  Thrasher Teeth.  1546  Terms.—Four months; 3 per cent. discount for cash, if remitted within 30 days.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |
|                          | Furnace Floor and Straightening Plates.  Housings and Castings not otherwise specified. 25 e Guide Plates.  Spindles and Coupling Boxes. 2 e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |
| .0¢                      | Housings and Castings not otherwise specified. 212                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |
| 110                      | Guide Flates. 3¢ Spindles and Coupling Boxes. 2¢ Sand Rolls and Pintons, large size                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |
| .20                      | Sand Rolls and Pinions, large size                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |

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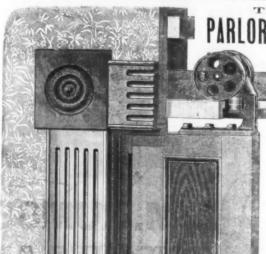
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|   | Spades, listdis 20                                   |
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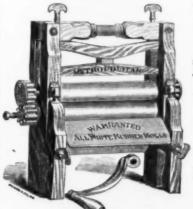
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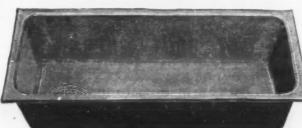
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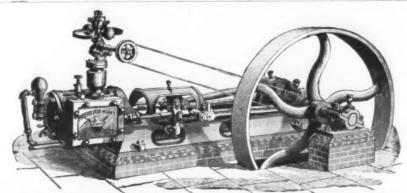
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Dividers.—Cook's.

Dog Collars...

Door Springs.—1 tre sRod.

Imitation Forrey's Rod.

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Underhill. Hay Knives.-Lightning. Hinges.—Strap and T (new list)
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 Hoes, —Eastern Tool Co.
 dis 60&10

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 New list. dis 50%5

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Tacks.
Swedes Tinned.
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Weather Strips. Packer's # dos 44.
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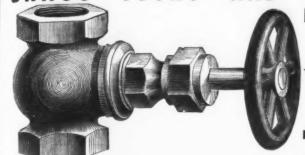
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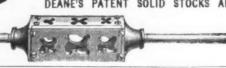
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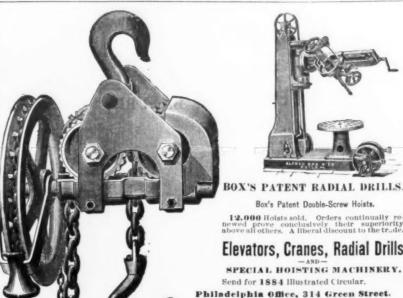
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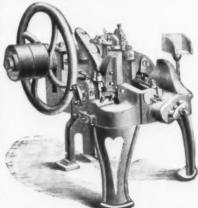
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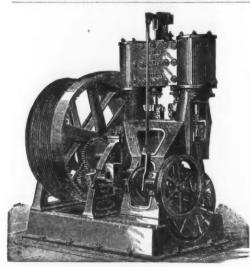
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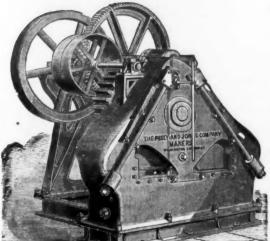
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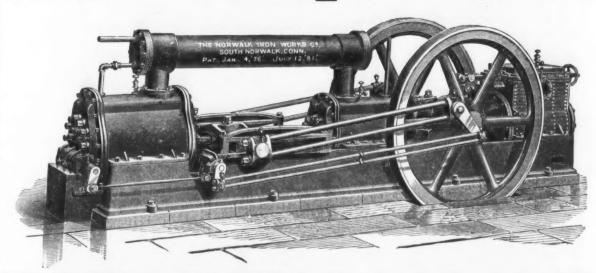
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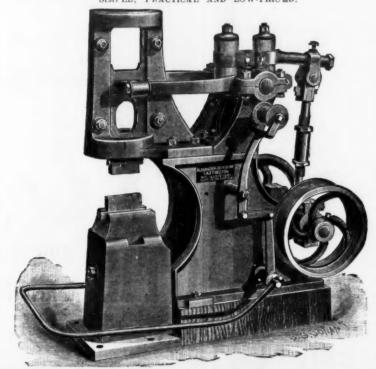
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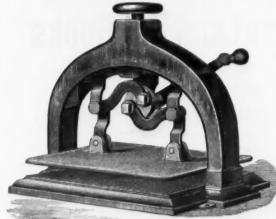
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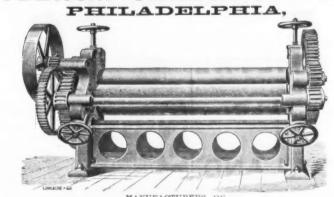
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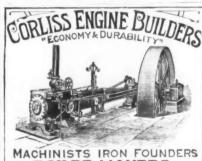
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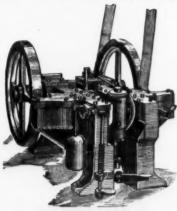
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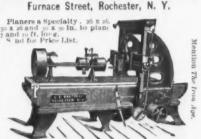
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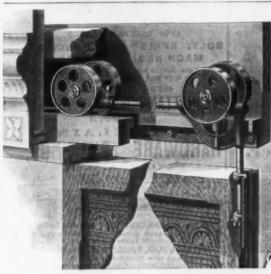
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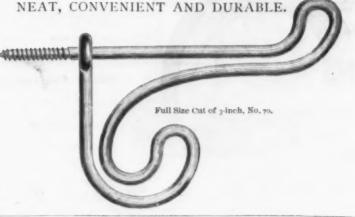
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